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# ***JPRS Report***

## **Soviet Union**

### ***Economic Affairs***

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# Soviet Union

## Economic Affairs

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24 AUGUST 1989

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### New Quality Control Chairman Seeks Alternative to Gospriyemka

18200441 Moscow IZVESTIYA in Russian  
15 Aug 89 Morning Edition p 2

[Interview with Valeriy Vasilyevich Sychev, doctor of engineering sciences, chairman of the USSR State Committee for Product Quality Control and Standards, by V. Romanyuk: "Quality: With Gospriyemka or Without It"; date and place not given]

[Text] Valeriy Vasilyevich Sychev might be called an outsider in USSR Gosstandart. He has never before worked in that system, although the committee's activity was not a closed book to him. At the age of 49, V.V. Sychev had traveled the road from an engineer to deputy chairman of the Military Industrial Commission of the USSR Council of Ministers. He defended his doctoral dissertation at 34. He pursued two courses of study at the Moscow Aviation Institute: aircraft efficiency and reliability and the synthesis of complex technical systems.

[Romanyuk] Valeriy Vasilyevich, the defense branches are widely known for their high level of technical sufficiency, the qualifications of their personnel, and their traditional devotion to quality. You do not have a feeling that you have come down from heaven to a sinful earth?

[Sychev] No. In a number of branches, especially in machinebuilding, things are just as well-organized. To be sure, defense industry people are accustomed to working with military representatives, and that is probably why, by contrast with civilian branches, they calmly accepted the birth of gospriyemka.

[Romanyuk] Nevertheless, gospriyemka had no place in the conception you proposed to the USSR Supreme Soviet. Yet this was the pet offspring of the previous leadership of Gosstandart. It is no accident that V.Ye. Kurtashin, chairman of the commission of the Council of the Union for Development of Industry, Energy, Engineering, and Technology, expressed the opinion in his parting words to you that the program you proposed would meet with a lack of understanding and even resistance on the part of a certain segment of the personnel in the old administration. To what extent have those forecasts been borne out?

[Sychev] I have not concealed my attitude toward gospriyemka and I am ready to repeat that it is not an instrument for product quality control. Accordingly, I have certain difficulties in relations with gospriyemka departments, which to a considerable extent are sticking with the old positions and are trying to preserve their bureaucratic apparatus. This is understandable: people have spent too long a time in positions developed in a period of what I would call total formation of ever newer gospriyemka entities. I have a good idea what pains were

taken to create that big system, which included 2,700 gospriyemka departments and its personnel numbered 53,000.

[Romanyuk] And now you have to militate against a department created by Gosstandart itself.... What have you already managed to do?

[Sychev] During the first 2 weeks of working in Gosstandart, I removed gospriyemka from more than 20 enterprises in instrumentmaking, metallurgy, the chemical industry, and heavy industry. To be sure, the wave has now been followed by backwash: gospriyemka personnel have been sending me all kinds of justifications so as to preserve their department in this or that enterprise, they have been writing to the USSR Supreme Soviet, to the USSR Council of Ministers, and to the central press. But work collectives have also begun to fight vigorously to throw off those reins.

[Romanyuk] Signals, sometimes contradictory, are also coming in to the editors of IZVESTIYA. We recently had a call from Yuriy Sergeyevich Korolev, chairman of the cooperative enterprise "Moscow Low-Voltage Apparatus Plant," who reported: auditors came from the procurator's office of Timiryazevskiy Rayon in the capital. All because the board of the cooperative dissolved gospriyemka, since it considered its prohibitory activity not only useless, but even harmful.

[Sychev] In a number of cases, imagine, I have come to the defense of gospriyemka. These issues have to be resolved concretely, provided the stable output of a sound product is guaranteed. I am in principle against wholesale campaigns both to institute gospriyemka everywhere and also to eliminate it.

[Romanyuk] And yet: Can it be said that gospriyemka's fate has been decided? And if yes, how much longer will it be able to hold on?

[Sychev] Perhaps a year.... These departments have by definition been staffed with highly qualified personnel who cannot be lost. After all, even the most convinced opponents of gospriyemka have not been saying that it was introduced to no purpose. In the early going, gospriyemka performed its tasks, put order in technical documentation and metrology. Probably there is good reason even in the future to have teams that could be sent out for 3 or 4 months to places where quality is really struggling. The mistake was in the drive for the "gross" and "coverage" to set up gospriyemka at enterprises that were doing well and were even advanced, and to a certain extent this discredited the very idea.

And further: the economic benefit from the activity of gospriyemka has usually been evaluated in terms of how many products it rejected on the first submittal. Some 27 billion rubles have been built up this way in the last 2 years. So, what is to be done: Is all this to be registered to the credit of gospriyemka? In my opinion, this system

only encourages the development of an obsession with volume and percentages, not by any means with improvement of quality.

To be sure, new factors have begun to emerge recently in the work of gospriyemka itself. In Vilnius, one such collective intends to give up budget financing and to enter into contractual relations with the enterprise whose products it is inspecting. It is a question of gospriyemka's active participation in adjusting the manufacturing process. That is an altogether different kind of effort.

[Romanyuk] It is clear that there were compelling reasons for undertaking this measure which was extraordinary in nature—instituting gospriyemka. How about now?

[Sychev] Whatever our attitude toward gospriyemka, the noneconomic character of its activity is obvious. A network of centers for certification of products and production operations themselves must become the basis of the quality control system. Unless that task is performed, we will not go forward and certainly we will not break through to the world market. So far, we have only isolated cases of such centers, although they have been talked about for a long time. I am setting myself the task: by the end of this 5-year planning period to create more than 200 product certification centers. I think that a substantial portion of gospriyemka personnel can be used in those centers.

About 150 enterprises have already come forth with demands for removal of gospriyemka. I do not intend to delay in solving this problem. But I feel that we need a full-fledged program for taking gospriyemka out of production and using it as the basis for setting up certification centers. As a matter of fact, when I described this prospect to Boris Sergeyevich Migachev, head of the gospriyemka administration, he became my ally. Certification will make it possible to bring quality control up-to-date and in line with world practice, which is what we need more than anything.

[Romanyuk] Once the activity of gospriyemka winds down, then, can we expect a strengthened role for plant OTK's [technical inspection department]? Someone has proposed transferring the OTK out from under the enterprise director.

[Sychev] In my opinion, that would be another gospriyemka. I am ready to think about whether it would not be worthwhile to eliminate the OTK's altogether. Let quality be the responsibility of the person who is directly employed in the manufacturing chain.

[Romanyuk] But how in that case is one to take the invitation the editorial office has received to attend a "round-table" meeting on the problems of improving the activity of gospriyemka? The invitation specifically came from the scientific-technical council of USSR Gosstandart.

[Sychev] The meeting was prepared without my knowledge. I have already canceled it. Incidentally, I have just learned that a national GOST has been drafted in the committee—a conformity mark (form, size, and technical specifications) which is proposed for labeling our products. To knock on the door of the external market with such a mark is just like presenting the unconvertible ruble or the notorious Quality Emblem to trading partners. At present, we are far from world recognition, and we need to make bolder use of certificates from well-known firms.

[Romanyuk] Emphasis is being put in the new structure of the committee on quality control rather than inspection. Controlling what you already do not have enough of?

[Sychev] It is not just a question of strengthening the pressure of control on quality, but rather of a scientific approach to control, of introducing statistical methods of analysis and checking, methods of setting standards for reliability—in the stage of development and design, of using standard processes—in the stage of manufacturing the products.

I consider it extremely important to develop an effort precisely to adopt standards governing processes, without which it is difficult to achieve stable quality. In our country, we have more than 20,000 standards in effect, but barely a dozen that pertain to manufacturing processes. Is it any wonder, then, that quality is "adrift"?

[Romanyuk] They say that you have to pay for quality. But what in your opinion is the price?

[Sychev] Economic conditions are necessary in order to stimulate improvement of quality. That is why I intend to institute an economic department large enough to obtain answers to the questions raised by practice. During discussion of my nomination in the committees of the Supreme Soviet, there were quite a few questions of a specifically economic nature. For example, how to combat the "rinsing out" of products that are good, but inexpensive? What is a decent way out of the deadly triangle: "quality—shortage—monopoly"? Another reason I say this is that in fighting for high quality, one must also deal with such concepts as pricing, self-financing, and cost accounting (khozraschet). Unless economic levers are activated, we will not be able to stop the constant drop in quality, and the system as a whole will not begin to have a controlling influence.

[Romanyuk] Perhaps the market will force us to turn toward quality?

[Sychev] If we view the quality control system as a living organism, then the market is its circulatory system. Saturating the market with products invigorates the struggle for quality. We should not be confused by the word "struggle." Everywhere in the world it is precisely a struggle to manufacture an improved product, of course, at lower cost. But in our country we still have not

created a mechanism that would motivate an improvement of quality. I do not count the numerous declarations contained in various kinds of decrees.

[Romanyuk] And the draft of the Law on Product Quality and Consumer Rights Protection? Surely, it creates such a mechanism?

[Sychev] That draft is too general in nature, to put it figuratively, it is an "open door" that does not afford the possibility of controlling quality effectively. Protecting consumers' rights must be the overriding objective. The purpose of the committee's effort is in fact to protect the interests of the state and consumers along three main lines—safety, resource conservation, and the environment. The quality control system must guarantee the competitiveness of our products, conservation of resources of every kind, and environmental protection, that is, this very process must have a social orientation.

[Romanyuk] But if consumers have the last word in evaluating quality, there must be a mechanism for the exercise of those rights, isn't that so?

[Sychev] Quite right. The draft of the Law on Quality does contain some declarations about that. I do not intend to make a judgment about the mechanism.... I am convinced that rights can be exercised more effectively through consumers' societies. Taking advantage of this occasion, I appeal to consumers to form societies. I think that the reality of the rights and functions which they take upon themselves will depend on the activity of those societies. Moreover, the consumers' societies must operate both at the level of cities and regions and also at the level of republics and the entire nation. For its part, Gosstandart guarantees them help and encouragement as partners in a common cause.

[Romanyuk] So, in the end exactly who is to be responsible for quality?

[Sychev] The manufacturer is responsible everywhere in the world. Open the document issued by the International Standards Organization entitled "Product Quality Control." How does it begin? This is how: "The basic problem of every company, enterprise, or organization is the quality of the product it produces and the services it renders." The same thing is written in our own Law on the State Enterprise. But whereas abroad a deviation from mandatory standards is viewed as a punishable criminal act, we have nothing of the kind. Our standards are not even able to set the technical level beneath which no one has the right to drop. After all, we still have to define the stages by which we must advance to the level of international standards. To be honest, we do not have a state system of standards, but a system of departures from the standards. Every departure is a failure that has legitimized poor work and imposes a search for all kinds of arguments just to prevent a change for the better.

[Romanyuk] Both during the stagnation and in the time since, we have had occasion to hear certain Gosstandart specialists say that all the departures and allowances

embodied in the standards resulted from concern for their prestige. But can a standard be given prestige when it does not stick to principles?

[Sychev] No, of course not. The trouble is that the standards have been drafted within the branches and approved in conferences for reconciling differences, and actually this is done in private. My basic position is to do away with all of the branch institutes for the drafting of standards and to turn their functions over to technical committees of large complexes, concerns, and associations. I propose that some 150-200 of them would be created in the country.

Quite recently, I received a letter from B.Ye. Paton, member of the academy, who reports that the Welding Institute of the UkSSR Academy of Sciences, which he heads, is willing to be involved in drafting standards concerning processes—that is, standards on welding and processes associated with it. What is more, Boris Yevgenyevich expressed a readiness to head the technical committee for drafting such standards and he proposed his own structure for the committee, its subcommittees, and the working groups. I think that the technical committees, backed up with the prestige and participation of representatives of Gosstandart, could impart a new element to this effort as well. The drafts of the standards would be published for broad discussion in the journal STANDARTY I KACHESTVO.

The teaching of methods of quality control to practitioners has, of course, to be organized. This is not taught in a single one of our VUZ's. We are mobilizing our own specialists—incidentally, there are not so many of them—and we are calling upon foreign firms. Worthwhile experience in organizing the work of an association of "quality groups" has been gained in the instrument-making industry. There is an understanding with the State Committee for Public Education that a course in product quality control is to be instituted in technical VUZ's.

[Romanyuk] Excuse me, but what will Gosstandart's interest be in this respect?

[Sychev] We will take money for certification of products and processes, for conducting tests of products and machines. I think that the more competently our services are rendered, the greater the demand will be for them. That is when the possibility will arise of talking about introduction of elements of cost accounting even in the work of Gosstandart.

It would also be naive to look upon the problem of quality apart from its relation to social issues. Where the housing situation is bad, quality is not splendid either, nor can you expect high quality when personnel turnover is high. By detecting and pinpointing the weak points, we need to clarify straightforwardly what depends on economics, what depends on discipline and technology, or what comes from the social situation. That is the foundation on which we intend to set up the quality control system.

**Economic Reform Commission Member Discusses Goals***18200438 Moscow EKONOMICHESKAYA GAZETA  
in Russian No 31, Jul 89 pp 16, 17*

[Interview with Petr Makarovich Katsura, 1st deputy chairman of the State Committee for Economic Reform of the USSR Council of Ministers; date and place not specified: "For the Reform—An Acceleration"]

[Text] The course of perestroika is dependent to a decisive degree upon success being realized in the radical economic reform. And as noted during the USSR Congress of People's Deputies, some slippage is occurring in the practical realization of its ideas and principles, and inconsistency, indecision, sluggishness and at times even deviations are being tolerated.

What are the principal reasons for these failures and what can be done to ensure that the reform has a greater effect on perestroika? These and other questions must be answered by the State Committee for Economic Reform of the USSR Council of Ministers. It has already been created (the decree of the USSR Council of Ministers concerning its confirmation is published below).

The Editorial Board asked the 1st deputy chairman of the State Committee for Economic Reform of the USSR Council of Ministers, Petr Makarovich Katsura, to answer the questions sent in by our readers.

[Editorial Board] Petr Makarovich, our hopes for radically improving our economic mechanism are associated with the creation of the Committee for Economic Reform. Tell us if you will what tasks are confronting it and what are its functions.

[Katsura] As mentioned during the Congress of People's Deputies and the 1st session of the USSR Supreme Soviet, a need has recently arisen for daily and systematic analysis of the processes taking place and for thorough and comprehensive validation of the scheduled steps to be taken for economic changes and for improving the organization for controlling the economic reform process throughout the country. This is precisely what dictated the need for creating the State Committee for Economic Reform of the USSR Council of Ministers as a permanent organ of the government.

The principal tasks of the committee, as set forth in the decree of the USSR Council of Ministers, are associated with improving the methods for state planned regulation for developing the national economy, the development and introduction into operational practice of interrelated measures for formation of the socialist market and also with organizing work directed towards restructuring the management of the economy and social sphere in the union republics and regions.

The committee is commencing operations during a period that is viewed as being complicated for the country. Over the past year and a half, a noticeable deterioration has taken place in the economic situation

and it is continuing up until the present day. The course of the reform has slowed down substantially, discrepancies have started to appear in certain elements of the economic mechanism and many decisions of the economic reform are being carried out in an inconsistent and slow manner. The state committee must accelerate the process of economic change. This task is particularly vital at the present time, since neglect in the solving of some socio-economic problems is already resulting in acute social conflicts. The need for accelerating decisive changes in the managerial methods was emphasized in particular by M.S. Gorbachev during a recent interview on Central Television.

The committee is obligated to ensure the completeness of the measures undertaken and to establish their validity in a thorough and comprehensive manner based upon an analysis of alternative variants.

In the interest of carrying out the work concerned with unfolding the economic reform on a strong legal basis, the development of draft legislative documents for the various spheres of economic activity is singled out as one of the more important tasks. Here we have in mind such bills as laws governing ownership, lease operations, taxation systems and a number of others. The committee has been granted extensive rights for the purpose of carrying out these and other important tasks. For example, it is authorized to hand down decisions issued in the form of orders by the USSR Council of Ministers. It is also authorized to halt the action of normative and methodological documents of ministries, departments and republic committees concerning implementation of the economic reform, which are not in keeping with the legislative documents of the USSR or the decrees or orders of the USSR Council of Ministers.

The right extended to the committee to provide direct guidance for the work of USSR Gosbank, USSR Goskomsen [State Committee on Prices], USSR Goskomtrud [State Committee on Labor] and USSR Goskomstat [State Committee on Statistics] should serve to make the work of the committee more efficient.

[Editorial Board] What can be said regarding the structure of the committee itself?

[Katsura] It was established in a manner so as to orient a collective towards solving the principal problems of the economic reform. This has to do first of all with the conceptual working out of the problems of the transitional period—primarily for the time remaining up to the end of the 12th Five-Year Plan and for the 13th Five-Year Plan and also the development of scientifically sound recommendations for long-range problems. Secondly, the development of effective measures for state regulation of the economy using economic methods: new approaches for the formation of state plans, financial-credit mechanism, wholesale trade and prices. Another important direction to be followed is that of solving those problems concerned with distribution relationships and the mechanism for carrying out

priority social programs and also the problems of restructuring the organizational structures for administration. I would note that in the latter instance we had in mind optimization of the branch and territorial administrative structures at the level of high administrative elements and in the principal element—enterprises and associations.

And finally, solutions must be found for a complex of problems associated with the training of personnel of a new type—perestroyka personnel. This is a serious socio-economic problem and one which requires a solution if perestroyka is to succeed.

The organization of work for each of the mentioned problems will be carried out by an appropriate group of skilled staff specialists of the state committee. Moreover, it should be emphasized that the functions of each element of the committee's staff include the complete development of solutions—from initial development to their practical embodiment and also constant control over and analysis of the work being carried out by all elements of the new economic system. Thus we do not foresee any light workloads for the workers.

There is one other factor that bears mentioning: we cannot conceive of our work being carried out in the absence of close interaction with the commissions and committees of the USSR Supreme Soviet. And this is also one of the more important functions of the newly committed committee.

[Editorial Board] And according to what principle is the committee's staff being formed?

[Katsura] First of all, it will be necessary to enlist for work on the committee the services of some of the more skilled specialists, eminent soviet scientists and experienced economic leaders of production associations—active advocates of economic restructuring.

As is evident in the published decree, the committee's staff includes some individuals who were examined thoroughly in the USSR Supreme Soviet during a discussion of their candidacies for the governmental staff.

Participation in the work of scientists, the leaders of central economic organs, ministries and departments and also large production associations will make it possible to solve the vital problems of the reform in a thorough manner and to ensure the use of an all-round approach for the development and implementation of the more important elements of the radical economic reform and the preparation of scientifically sound recommendations on an alternative basis.

A Scientific-economic Council charged with preparing scientifically sound recommendations for the principal problems associated with the socio-economic reform has been created attached to the committee. We are also counting upon serious participation by the Academy of the National Economy of the USSR Council of Ministers, which is subordinate to the committee and also by

the Institute of Economics of the USSR Academy of Sciences—as the basic scientific organization and other academic and branch institutes of an economic profile.

[Editorial Board] What is the work program for the committee for the immediate future?

[Katsura] For the immediate future, the committee's work will include the development and implementation of urgent and extreme measures aimed at halting crisis phenomena. Here we have in mind the development and adoption of measures for financing normalization of the economy and regulating monetary circulation throughout the country. A number of important decisions must be handed down in connection with regulating the organizational structures for administration, particularly for ministries and departments. On the agenda—a discussion of the draft statute on ministries of a qualitatively new type, those which are in operation during the period of converting over from administrative-command to economic methods of administration.

It is obvious that the program for priority concerns will include other questions associated with carrying out the decisions handed down during the 1st Session of the USSR Supreme Soviet.

Of equal importance in the work of the committee is the development of an economic reform strategy for the period devoted to converting over to the new economic system. If an overall strategy is not available, it will be impossible to hand down decisions for individual and specific elements of the economic mechanism.

### Changes to Law on State Enterprises Highlighted 18200445

[Editorial Report] Moscow TRUD in Russian on 13 August 1989 carries on page 2 a 2,000-word interview with A. Orlov, deputy chairman of the State Commission for Economic Reform under the USSR Council of Ministers. In the interview, published under the headline "Realities and Prognoses," Orlov is asked to comment on the amendments to the Law on State Enterprises recently adopted by the Supreme Soviet and to discuss their impact on the country's long-term economic reform program.

According to Orlov, one of the most important changes permits labor collectives to choose independently their own form of management, whether it be one of the two models of cost accounting, leasing, and cooperative or share-holding arrangements. Previously this decision was made by higher level ministerial authorities. The second change stipulates that state orders will no longer encompass 100 percent of an enterprise's production output. Orlov notes that no specific limit on the share of state orders was established, but he believes that "at a minimum," enterprises will be permitted to dispose of 5 percent of their output in any way they see fit. A third change to the law creates a progressive tax scale on enterprises' wage funds which will take effect on 1



October. Orlov explains that the tax will be levied on every percent of increase in an enterprise's wage fund above 3 percent. He points out that the "severe" tax scale was necessitated by the uncontrolled growth of wages in recent months. He notes, however, that the new scale is only a temporary measure pending the adoption of new tax legislation that is presently being drafted.

Orlov concludes that the newly adopted changes are not intended to have an immediate effect, but are oriented toward further economic reforms and the creation of a new economic mechanism, which he says will be achieved "without fail."

### **Directors Surveyed on New Management Conditions, Reform Progress**

18200432 Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA* in Russian No 6, Jun 89 pp 49-62

[Article by V.N. Zadorozhnyy, doctor of economic sciences, and A.V. Makarov, candidate of economic sciences, both of the Economics Institute of the Urals Branch of the USSR Academy of Sciences, Sverdlovsk: "Directors in the Urals and the Radical Reform: A Year Later"]

[Text] A year ago, we published the results of a survey of directors in the Urals on their attitude toward the radical economic reform. Have the business executives changed their positions as they gained experience in operation under the new conditions? A summarization of their opinions and assessments is the basis of this article. We should mention that 22 percent of the respondents began operating under the new conditions in 1987 and 53 percent in 1988; while the rest are preparing for the transition.

### **Where Are We Headed?**

The attitude of the directors toward the question of the goals of restructuring has changed little. Once again the interests of the enterprise and of the work collective are in the foreground and those of the national economy in the background. There is somewhat greater motivation of enterprises to speed up scientific-technical progress, for resource conservation, for retooling production, but less attention is being paid to product quality and the internal consistency of plans. Democratization and self-management in the enterprise and the readiness to go onto the world market come last in the series of national economic goals of restructuring, as in fact they did a year ago.

This conception is felt to be clear at the level of the enterprise by 78 percent of the managers (63 percent a year ago) and clear at the level of the branch by 26 percent. The conception of regional management is accepted by only 13 percent, and relations between enterprises and the region by 29 percent of the respondents. Very few managers consider the conception of relations between enterprises and the branch and the

region to have been thoroughly worked out, and in fact among those who have begun to work in the context of self-financing, the dissatisfaction has been increasing. Which means that a large portion of the managers are still mistrustful of restructuring and to a large extent they are still operating in the dark.

The relations of enterprises with ministries remain contradictory. It is quite often said that the influence of ministries intensified in the initial stage of the reform. The responses of the directors, including those who have been working under the conditions of self-financing, do not confirm this. The ministries are able to influence enterprises most appreciably through the state order and by taking away a portion of profit into centralized funds. Half of the directors who have been working under the new conditions pointed out that ministries have been violating the rights granted by the Law on the Enterprise. Directors have a fight ahead for their rights, and it will in part be waged through arbitration.

Are ministries operating more efficiently? A fourth of the respondents, including 12 percent of those who have made the transition to the new conditions, answered this question affirmatively, and 44 percent in the negative. The reduction of the staff size of ministries that occurred during the complicated period of restructuring, while the administrative methods of management were retained, has had the result that the ministries have ceased performing necessary functions, which has compounded the problematical status of enterprises. Perhaps it is because they have suffered without the "maternal" solicitude of the ministries that 59 percent of the managers have asked for them not to be abolished and only 19 percent favor expansion of enterprise independence in every way and elimination of the ministries.

As for the strategy of relations with local authorities, the assessments of directors have changed essentially in 1 year: in all lines of activity (housing construction, construction of children's institutions, health care, transportation services, road construction, etc.), the number who want to engage in the activities independently has decreased substantially, most are ready to turn over funds to local soviets for centralized use.

The time frame covered by the respondents' program of action toward restructuring in most cases does not extend beyond the limits of the current 5-year planning period; only 1 out of 10 sees it in the limits of the next 5-year planning period, and none of them were among those who have been working under the conditions of self-financing.

Among the causes holding back restructuring, the directors refer first of all to the desire of superior authorities to use the old methods toward enterprises. But whereas a year ago the greatest objections of the managers were aroused by preservation of the attributes of the administrative system of management—red tape and revision of legislative and normative documents and the imperfect planning, now they are oppressed because the new

economic mechanism has not been worked out in detail and especially by the imperfect nature of pricing, the lack of responsibility concerning deliveries on the part of trading partners, and the scant opportunities for updating equipment. It is curious that even the proposals for accelerating restructuring have remained the same ones as a year ago: strength and independence, strict enforcement of the Law on the Enterprise, greater stability and internal consistency of planning, guaranteed continuity in material and technical supply, and development of cost accounting (*khozraschet*), especially the second model.

Thus, the lag of restructuring of certain elements of the economic mechanism is having an ever more appreciable effect. The directors are less disturbed about the unpreparedness of personnel for operation under the new conditions, the lack of experience with major changes, and the waiting attitude of workers and engineering and technical personnel when it comes to restructuring. Which means that a clear and all-inclusive program of action is needed above all.

How is restructuring to be improved: along the lines of the principles contained in recommendations from above or through a creative search? It is gratifying that the share of those who prefer the latter strategy has increased, especially among those who were in the front ranks of making the transition to the self-financing regime. Among the areas in which independence has been displayed, they mentioned the intensification of internal cost accounting and the strengthening of cost-accounting liability of the enterprise, application of diverse forms of remuneration, improvement of management, and new approaches to evaluation of personnel.

Do special authorities have to be created for restructuring of the economic mechanism? On the whole, the attitude toward this was negative (80 percent), but a fourth of those who have been working under the conditions of self-financing feel that such committees for restructuring are needed. This effort is coordinated at enterprises as follows: in 10 percent of the cases by one of the existing departments, 10 percent by workers' councils, 26 percent by a specifically created subdivision, while 54 percent said that every subdivision "is dying alone."

#### In the Way of Scientific-Technical Progress

The main reasons mentioned for enterprises not being receptive to application of the advances of science and technology, just as before, are difficulties with supply as the transition is made to new technology and having to go through the large number of different levels for decisionmaking on new technology. The importance of other counteractive factors (deterioration of the volume indicators of production, the outdated system of planning and recordkeeping, lack of motivation for application) has diminished or remained the same. They were indicated by 20-25 percent of the managers. Almost half

of the directors related the unreceptiveness toward scientific-technical progress to shortcomings in pricing, and more than a third to the absence of large-scale development projects. At the same time, those working under the conditions of self-financing pointed to these causes considerably more frequently (more than 70 percent), and they attributed a smaller role to other factors.

Among the measures making enterprises more receptive to scientific-technical progress, the directors, just as they did a year ago, referred to the rise in the effectiveness of scientific developments and then to special-purpose priority supply of measures related to new technology, changing prices of new technology, and the transition to wholesale trade.

In the opinion of two-thirds of all the respondents and 80 percent of those who have made the transition to self-financing, enterprises must define the directions for use of the fund for development of production on their own, without intervention of the ministry. The position of those who are ready to extend this right to the ministry seems to have been shaped under the influence of factors which are inhibitive: difficulties in handling these funds and the lack of information about the prospects for technical development; unwillingness to make decisions on strategic issues and the fear of taking risks were also involved. Our research has shown the insufficiency of funds for development to carry out projects for retooling enterprises, although as a rule these funds were not smaller than had been planned. These funds were considered inadequate by only 5 percent of those operating in the context of self-financing, 29 percent are prepared to use bank loans for those purposes. The problems of retooling, which in the initial period of the transition to self-financing may in fact slow down, remain acute.

What should be the ministry's role in creating new technology? It is felt by 87 percent of the business executives that the ministry must finance the state order on a centralized basis. Half of the directors are ready to put up their development funds for sectorwide programs for scientific-technical progress through contractual relations with the ministry, but if enterprises obtain an order from a head organization to master new technology, two-thirds of the directors are ready to finance it out of their own funds. Two factors are operative here: the psychological factor—the greater the centralization of the assignments, the less ready the managers are for "self-financing," and the economic factor—the less centralization there is, the greater the possibility of applying contract prices, which signifies the possibility of reimbursement of the higher costs of new technology and a broader field for enterprise.

Are the new economic conditions opening up opportunities for improving product quality? A year ago, there was not a single affirmative response to this question. Now, they represent 10 percent. A majority of directors believe the measures that have been taken are insufficient.

Among the measures necessary for major improvement of quality, just as was the case a year ago, first place is taken by the increased responsibility of suppliers for quality and for the promptness of deliveries and their liability for full reimbursement of loss. But beyond that, priorities have changed. The managers who have been working under the conditions of self-financing place a high value on complete elimination of the monopoly of producers and freedom of choice of supplier and the organization of joint enterprises with the firms of the capitalist countries. These factors pushed into the background the broadening of the rights of enterprises in the area of pricing and planning, the transition to direct contracts and to contract prices, and improvement of remuneration. The respondents placed the lowest value on purely administrative measures—state acceptance and the tightening of GOST's.

It is striking how ill-informed the managers are about world advances and progressive know-how. Although the share of those who are unaware of the parameters of comparable world models of the product produced by the enterprise has decreased from 22 to 13 percent, too many of them do not have information in this area. This results in "boastful" attitudes, nearly a third of the managers consider their product to be competitive on the world market (in the assessment of Minvneshtorg, only 10-15 percent of the products of domestic machinebuilding are competitive), 15 percent suppose that it could be made competitive in the current 5-year planning period. Unfortunately, the ministries have not begun to furnish enterprises a better supply of information: only 11 percent receive information from them about the best world examples, 3 percent receive this information very late, 51 percent receive information that is partial, and 35 percent receive none at all. Which means that in spite of all the organizational restructuring, there has been no turn toward the needs of the enterprises, the ministries have not been able to become an entity for strategic management, an important part of whose work would be to supply information to enterprises.

Among the measures for combating monopolization, the business executives proposed direct relations with foreign firms, creation of competing production groupings by branch ministries (with their own funds), the organization around the enterprise of independent production operations to manufacture components. A lower grade was given to performance of state intersector programs to break up the monopolies, to extend aid on a contractual basis to supplier enterprises and state antimonopoly legislation. And the lowest grade of all was given to associations of consumers that would combat the monopolism of producers. So, the managers believe more in specific production and organizational and technical measures than in legislative acts and long-range state programs. The directors, who have been suffering from the arbitrariness of suppliers and low product quality, sing the same tune when it comes to the consumers of their own products.

### Does the Enterprise Have Sufficient Rights?

In the evaluation of the advantages of self-financing, a more sober and restrained attitude toward its capabilities was displayed than a year ago: after all, as the new method spreads, not only its virtues, but also its shortcomings, become evident. But whereas earlier the highest grade was given in evaluating the advantages of self-financing to the possibility of putting order in relations with the budget thanks to establishment of standard rates governing the distribution of profit, its greatest advantages seem to be safeguarding the interests of the enterprise against arbitrary confiscation of profit by superior authorities. But those who have made the transition to self-financing remark on the broader rights of enterprises in stimulating high-quality work. Again, we see bias toward the interests of the collective rather than the interests of society.

Consequently, in the initial stage the radical reform is oriented above all toward emancipation and independence of work collectives, toward differentiation of remuneration. It does not presuppose acceleration of the socioeconomic development of the economy, nor does it activate scientific-technical progress and resource conservation. And, it is evident, as a consequence of the lengthy process of stratification of enterprises—the flourishing of some and the abolishing of others which are uncompetitive—the restoration of our economy to health will be guaranteed.

The prospects for introduction of the various models of self-financing will depend to no small degree on the managers' attitude toward them. Preference is given to the second model by 39 percent of them, but the figure was nearly half of the "novices" and only one-tenth of those who have 1.5 years of experience. What is this—a strategy for survival or blind protection against the first financial blow?

Does self-financing make it possible to bring about restructuring of the economic mechanism? A year ago, an affirmative answer to this was given by one-fifth of the respondents, and now the figure is nearly half. The goals of restructuring (and those noted by the directors were mostly the goals that correspond to the interests of the enterprise, the collective) can be seen as intermediate goals. But even self-financing, after all, is only an intermediate model of the economic mechanism based on economic methods of management. Managers are relying ever more confidently on self-financing in achieving the goals of their enterprise, they are mobilizing internal potential, and they are seeking out ways of realizing the potential capabilities afforded by the new economic conditions.

The effectiveness of self-financing is detracted from by the following (in decreasing order of importance): shortcomings in material and technical supply, the arrival at standard rates by counting backward, the 100-percent state order, the monopoly position of producers, and the greater pressure exerted by ministries. The shortcomings

of material and technical supply were also named as the principal reason for difficulties in achieving more detailed intraplant cost accounting. Then came the lack of preparedness of personnel in shops for predominantly economic methods of management, insufficient elaboration of methods and the continuing practice of diverting the resources and personnel of the enterprise. These difficulties were caused, in the opinion of the directors, to a considerably lesser degree by the administrative methods of management and the unstable financial situation of enterprises.

How is this to be helped? First of all, to place at the disposition of enterprises the full amount of depreciation; second, independent redistribution of funds in accounts that are temporarily uncommitted; and third, to apply contract prices. Reference was also made to strengthening penalties for breaches of contracts, the right to choose suppliers and consumers, and the establishment of wholesale trade. It would seem that these opinions of the business executives would be a guide for action of policy-making bodies.

Unfortunately, there has been very little reinforcement of the confidence of business executives in the stability of economic policy. Some 21 percent of the managers (15 percent a year ago) believe that the standard rates of deductions from profit which have been established will not change, and among those who are now working in their 2d year on the basis of self-financing the figure was 48 percent, and 33 percent believe that unused remainders of resources will not be confiscated. The distrust has been built up over the years, which is why a departure from the course that has been outlined can spoil the attraction of independence. Following discussion of the draft, a new article appeared in the Law on the Enterprise guaranteeing observance of the rights of enterprises, but only 7 percent of the managers (5 percent a year ago) are convinced that these rights will not be limited by higher authorities.

The Law on the Enterprise has granted important rights in improving management structures. Most directors have reorganized the economic, legal, and financial departments, half of them have reorganized departments for development planning, engineering, and social development. But the research conducted showed that these transformations have done little to change the economic mechanism and the system of operation in the enterprise. This is only the beginning, and a majority of the directors are inclined to go further.

The attitude of the directors toward the fate of enterprises operating at a loss is interesting. Only 16 percent of them consider it possible to maintain them with subsidies; but the figure was 25 percent among those operating in the context of self-financing. What measures are proposed for enterprises operating at a loss? First of all, a strengthening of management personnel, then comes transfer to another enterprise (association). Review of product prices comes only in the third place. Some 15 percent of the directors feel that the activity of

an enterprise operating at a loss should be terminated, the assets sold, and the collective disbanded.

The attitude of the managers toward voluntary association, cooperation among enterprises on contractual principles (associations, syndicates, etc.), can be seen as a noncommittal waiting attitude. They have a good opinion of such interactions, but they do not display a very pronounced desire for associations. But the instability of the financial situation of each individual enterprise drives it to look for a "solid roof," the creation of collective entities for protection. The managers are attracted first of all by the possibility of regulating in contracts the economic liability of participants in the associations and then by flexible use of resources and capacities, while at the same time preserving organizational independence and voluntariness.

### **The Law Is Being Revealed Through Its Operation**

Before adoption of the Law on the Enterprise, only half of the directors were satisfied with it. In all spheres of activity such as pricing, material and technical supply, the marketing of products, jobs, and services, and financial activity, more than half of the managers considered the rights accorded by the law insufficient. Now, there is growing confidence as to the possibility of exercising those rights. The managers are satisfied to the highest degree with the following areas of activity (named by more than 75 percent of the managers): the collective's social development, the marketing of products, jobs, and services, financial activity, credit financing, labor and wages, plant and equipment, and the resources of the enterprise. Which means that the gradual transition is taking place in practice from cautiousness to a desire to discover the opportunities which the law embodies.

The shaping of the plan for the 13th FYP will be a true test of the radical reform. If in conformity with the law the reference figures of the plan are not binding on the enterprises, then that will signify gradual progress of the reform. But the managers have serious doubts about that: three-fourths of them are convinced that the ministries will not allow administrative control to slip from their hands in the 13th FYP. Thus, the managers are again reminding policy-making bodies: discovery of the internal potential of the enterprise cannot be counted on until the progress of the reform is persuasive as to its irreversibility.

So long as the economy is unbalanced and prone to shortages, the monopoly position of producers is preserved. Under those conditions, just like a year ago, 84 percent of the managers, including 94 percent of those who have been working under self-financing for 1.5 years, intend to make up a portfolio of orders on the basis of the direct contracts. But in militating at the same time for independence, the business executive would like a large portion of the program (approximately 60 percent) to be determined by the state order. Which means that the fear of true independence has not been entirely overcome.

An additional stroke in the portrait of the manager has to do with independence in pricing, a point of the reform in which there is such great interest. There is a greater readiness to take part in economic competition when prices are chosen as a weapon in that struggle. The share of those who look upon contract prices of products as a factor for increasing profit has increased from 35 to 55 percent. But if the manager is potentially more ready to turn toward the consumer, there are no clear ideas about actions in the area of pricing, just as at present there is actually no conception for the restructuring of pricing.

### Election of the Manager

In the past year, there have been significant changes in the attitude of managers toward this issue. There has been an increase from 9 to 38 percent in the share of those supporting the idea of election of directors, department chiefs—from 15 to 23 percent, and shop chiefs from 26 to 52 percent. There was some wavering over the idea of electing foremen (from 62 to 50 percent) and brigade leaders. It is evidently difficult to find foremen even as it is, so in this case elections are not favored.

It is still early to rush to conclusions: although the problem has been widely covered in the press, only isolated individuals have had real experience. The demands upon managers are growing from both above and below, which is why "whom to elect" is becoming a more serious problem than "whether to elect or not elect." More than 90 percent of the managers—substantially more than a year ago—indicated difficulties in nominating candidates for all management positions.

The influence of the work collective has been manifested in a reduction of the share of managers who defend the right of the director to remove an elected manager for oversights in his work. We should mention that the superior manager has that right under the Labor Code.

The constructive aspects of electing managers were not esteemed as highly as was anticipated. The managers showed vigor in evaluating the improvement of the moral and psychological climate because the worthiest people have been promoted to supervisory work, managers are more accountable to the collective, a sense of being boss has developed, and the workers have a greater interest in the results of production. The elective nature of positions has had considerably less influence on operation in the context of self-financing, on the interest of enterprises in resource conservation, in using the advances of scientific-technical progress, and in improving quality. There is also an evident shift toward democratization: usually work collectives themselves constitute the pool of personnel for promotion.

The adverse effects of elections, as foreseen by the respondents, lie in the fact that the ability to make contact, to get along with people, were preferred over rigidity and the businesslike qualities of the candidate for a position.

### Sharing Power With the Workers' Council

Workers' councils (STK's), but, just as was the case a year ago, opinions concerning its status vary widely: only about a third of the managers see it as the supreme body for management of the enterprise, the rest consider it an advisory body or public (obshchestvennyy) body. That is how its role is seen in the future as well. It is evident that we have to trust in reality and see what happens.

The radical goals of restructuring the economic mechanism related to scientific-technical progress, quality, and efficiency turned out to be in last place in the assessments of the favorable consequences of creating STK's. The highest grade was given to activation of the human factor, to the increased responsibility for the results of the enterprise's operation, to reconciliation of the interests of the various categories of workers, and to monitoring the actions of the management. These assessments obviously could not have been otherwise. The managers have the greatest doubts about the absence of responsibility of the STK for the decisions it makes and for the effectiveness of the enterprise's operation, duality in management, the erosion of one-man management, the loss of time, and its resolution of issues for which it is not qualified.

Whereas a year ago only 27 percent of the business executives felt that any member of the collective could be chairman of the STK, and 45 percent felt that it must be headed by the director, now an overwhelming majority of 80 percent express themselves in favor of free election. And in the opinions of the other 20 percent the director of the enterprise has given up first place to a superior worker. Among the additional measures to activate the human factor, one innovation was proposed: creating ad hoc teams to solve particular problems of the enterprise.

### Altogether New Trends

The transition to the new conditions for remuneration has taken place at half of the enterprises. It was noted by 22 percent of the managers that serious difficulties have arisen in this connection for the workers (rerating, downgrading of their skill category), 37 percent referred to difficulties for engineering and technical personnel (staff reductions and the lack of resources in the wage fund), and 40 percent for both the workers and engineering and technical personnel. In the opinion of the business executives, the rights accorded by the Law on the Enterprise in the area of remuneration have been fully evident in such areas as determination of the forms and systems of remuneration, fixing the total number of workers and wage fund for the various worker categories, establishment of supplements for combining occupations, for expanding service areas, and for increasing the amount of work done without restricting the size of supplements by virtue and within the limits of the saving on the wage fund of the jobs eliminated.

These rights are exercised to a lesser extent in such areas as establishing pay premiums for personnel within the

limits of the wage fund: for workers on the basis of skill and for specialists on the basis of particularly important jobs. Still less use is made of these rights when engineering and technical personnel are included within brigades and when the transition is made to the contract. Finally, 75 percent of the managers have not been taking advantage of the right to apply the leasing contract.

A year ago, 23 percent of the managers communicated their intention to create cooperatives. Now, following adoption of the Law on Cooperatives, a third of the managers, including more than 40 percent of those who have been operating under the conditions of self-financing for 1.5 years, have created cooperatives. We should anticipate in the very near future a growth of interest in cooperatives as satellites of state enterprises. In the opinion of the managers, cooperatives could provide more than half of the paid services to the public now rendered by the enterprise, 30 percent of the construction repair services, 20 percent of the project planning and design developments, they could handle the operation of auxiliary production, and so on.

Practically all the managers who have been working in the context of self-financing intend to give up leveling, to encourage operation with fewer people, using the labor participation coefficient, the pay premium, and material liability (penalties and loss of bonus). They are less oriented toward use of the work contract and lump-sum rewards for achievements in work.

So far, according to the results of the survey, there have been no real shifts in differentiation of remuneration. Just like a year ago, the managers are also restrained in evaluating the possibilities of the new system of remuneration helping to tie together the interests of the workers and those of the collective. There is also growing nonacceptance of the decree on the new system of remuneration, in particular the increase in the fixed (rate, salary) portion of earnings, since this runs counter to the spirit of the radical reform.

In the opinion of the directors, the reluctance of supervisors of subdivisions to give workers differentiated ratings is holding back the exercise of the rights that have been granted in the area of the organization of work and remuneration, while other reasons are the insufficiency of the wage fund, the monitoring by superior authorities of observance of the growth rate of labor productivity and wages, the fact that a majority of workers do not accept differentiation of remuneration, possible conflicts in the collective, the fear of making mistakes, and the absence of material on methods.

We have not attempted to smooth out the contradictory nature of the responses received—this is the contradiction of life itself, the result of collision between the old and the new, of the search for the true way, of the difficult evolution of the new economic thinking.

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## Chemical Industry Introduces Experimental Tax on Income

18200434 Moscow *EKONOMICHESKAYA GAZETA*  
in Russian No 30, Jul 89 p 12

[Article by A. Isakov, head economist at the State Institute of Applied Chemicals and N. Polyakova, senior scientific associate: "Taxes Instead of Norms"]

[Text] Leningrad—The drawbacks of a normative basis for economic accountability [khozraschet] have on several occasions been the subject of discussion in "EG" [*EKONOMICHESKAYA GAZETA*]. However, the situation is not changing as rapidly as one would like. No fewer difficulties are posed by the introduction of lease contracts, whose numbers are growing under conditions of inflation, an imbalance in the demand and supply of goods, and the monopoly dictate of producers under the cost mechanism of price formation.

Taking into account the complexity of the period of transition to a new economic system, we are presenting for discussion a simple but effective method of economic accountability: an economic mechanism of taxation [NEM].

In our view, this method is a universal one which meets the goal of achieving social equity in taxation. It can be applied to industrial enterprises (associations), NPO's [research and production associations], NII's [research institutes], and design organizations. This mechanism can also be applied to cooperatives.

The essence of NEM is that all enterprises (associations), NPO's, NII's, and design organizations pay a sum from their gross income into the budget. Based upon a progressive scale, this sum is related to the amount of income an average officially listed worker earns.

The enterprise's gross income, as in the second model of economic accountability, is the sum that is arrived at after reimbursement for receipts from expenditures on goods and materials, including depreciation deductions. The state earmarks a sum based upon the aggregate gross income.

An enterprise's economic accountability income, arrived at in this manner, decreases by the amount of interest paid for short-term credit and is adjusted for unplanned income, outlays, and losses. This makes up the so-called net income, which is used for creating economic incentive funds. The size of wage funds depends only on the rates of growth of net profits. Upon a decrease in the rates of growth of net profits, the rates of growth of the FOT [Finance Department] decrease as well.

The transition from a system of the normative distribution of income to one of the taxation of enterprises is being widely discussed in today's press. The central question is, What should be the object of a program of taxation: final output, industrial assets, or resources consumed? Today it is necessary to find a methodological approach sufficiently simple and comprehensible,

but which would take into account the specifics of enterprises, which differ from each other in terms of volume of production and the number and cost of resources consumed.

We feel that the amount of gross income which actually goes to the average wage-earner at a given enterprise can serve as a taxable object. Naturally, these indices can vary completely at different enterprises, so we must address not only a tax, but a graduated tax scale.

We worked out an experimental scale for a progressive tax for nine enterprises and five organizations from one of the subbranches of Minkhimprom [Ministry of the Chemical Industry] of the USSR, proceeding from the mid-year level of payment to the budget for the five-year period.

The scale takes into account a range of incomes of average wage earners, from 3,300 to 11,440 rubles. One unit in the scale is 0.125 percent. This way the maximum tax rate for a given gross income is 55 percent. Enterprises whose average wage earner receives a gross income of 11,440 rubles or more all pay a 55 percent tax.

A scale can be devised using any curve; it can be designed within the framework of a branch or to encompass the entire national economy. As distinct from the present system of economic norms, the tax is not individualized for each enterprise, but constructed on a single methodological basis. As the basis for calculating the scale we used the level of all transfers of funds to the budget (payment for industrial assets and labor resources, a tax on estimated profits in the budget) for the five-year plan for 1990 and also payments from the above-mentioned organizations.

With the introduction of a system of taxing income we could abolish all normative taxes on profit (income). Gosplan [USSR State Planning Committee] would maintain a single branch (or interbranch) scale for tax payment to the budget coming from enterprises of the national economy, determining which share of the funds should go to the budget and which to the ministries' centralized funds.

NEM works in such a way that the rates of growth of payments to the budget upon the increase of gross income significantly raise the rate of growth of the economic accountability system and of net income. Upon lowering the number of workers against the financial base of a given year, the rate of taxation remains unchanged for a five-year period.

Upon raising the average number of workers against the level of a base period, the actual number of workers is used to calculate the tax rate.

Enterprises operating according to NEM should be entitled to all of the rights enjoyed by lease collectives. Economic indices do not become established, but rather

serve only as limits of state centralized capital investments for new construction and for dealing with particularly difficult problems. They also serve as estimated target figures for production output (expressed in kind) which have particular significance for the balance of the nation's economy.

Financing the technical re-equipment, reconstruction, and expansion of production affecting enterprises should be done using the enterprises' own means as well as bank loans. Taking into account that enterprises take on the financing of the simple as well as large-scale expansion of fixed capital, depreciation allowances (including repair funds) should remain at the full disposal of the collective.

In order to eliminate the intrabranched redistribution of assets among enterprises that function well and those that do not, the USSR Soviet of Ministries should adopt this tax scale.

Adopting a progressive tax will stimulate the more efficient operation of plants. For profitable collectives, the rates of payments to the budget will be even lower than present rates.

According to our estimates made for a subbranch of the chemical industry, upon the application of a progressive tax, payments to the state budget remain practically at the base level. Within the enterprises the redistribution of assets is taking place on a new basis. However, we should note that since in the proposed new system depreciation allowances remain entirely with the enterprises, the final economic accountability income grows (at an average rate of 37 percent).

The advantage of a progressive tax lies in the fact that it allows for the protection of enterprises from administrative interference. This tax is also more comprehensible and accessible to all workers. A single tax will create the possibility of more fully realizing the principle of social equity, and its reasonable scale will stimulate enterprises to produce greater results.

## PLANNING, PLAN IMPLEMENTATION

### Next 5-Year Plan To Continue Emphasis on Social Development

#### Encouraging 'Human Factor'

18200429 Moscow PRAVITELSTVENNYY VESTNIK  
in Russian No 13, Jun 89 p 2

[Article by L.B. Vid, deputy chairman of USSR Gosplan:  
"On the Threshold of the Next Five-Year Plan"]

[Text] What will the conception of the 13th FYP be like in the light of the comprehensive discussion in the USSR Congress of People's Deputies of the problems of a fundamentally new approach to centralism in management of the economy?



So that our representation of it might be very specific, we need to identify at least briefly the basic features of the 1986-1990 plan. To determine what parts of it should be developed, revised, and taken over in the subsequent work and what should be cast aside.

Taking the party's course as its point of departure, the plan for the current 5-year planning period called for radical reconstruction of the existing production potential and a substantial strengthening of the social orientation of the economy.

It needs to be emphasized as definitely as possible that the 12th FYP long ago ceased to perform a rigidly dogmatic function with respect to many of the directions it embodies. On the contrary, it has been reacting flexibly to the requirements of reality and to objective factors. And many changes have become an inseparable part of the FYP. The following are the most important changes.

In connection with the measures worked out for a fundamental increase in the level of safety in operation of nuclear power plants, the activation of capacity at such plants outlined previously was reduced. At the same time, opportunities were sought for reducing the resulting shortage of electric power by increasing its production at thermal stations. At the same time, 5-year plans for fuel extraction enterprises remained unchanged, and the entire necessary additional fuel was obtained by work collectives assuming additional obligations to produce petroleum, gas, and coal. The state

incurred expenditures to stimulate the efforts of collectives from centralized sources and furnish them the necessary material resources.

After the Politburo of the CPSU Central Committee examined in April 1987 the more detailed calculations related to solving the problem of providing every family a separate apartment or dwelling by the year 2000, it was found to be necessary to increase the rate of construction of housing and a number of facilities in the social and cultural service area. This segment of the plan was revised and is now being carried out. During the 5-year period, measures have been drafted and laid down as the basis for the effort to increase the production of foodstuffs and nonfood commodities and also to render paid services to the public.

Following the March (1989) Plenum of the CPSU Central Committee and the decisions that preceded it concerning acceleration of the development of the processing branches of the agroindustrial complex, the relevant sections of the 5-year plan were revised on the run, but it has still remained the main organizing document in the operation of the national economy.

Although it is not customary to present various tables in newspapers, we will give just one section of the 12th FYP which reflects the absolute increase (+) or decrease (-) of the activation of the most important social welfare facilities (compared to the two previous 5-year planning periods):

Indicators of the Most Important Social Facilities	Unit of Measurement	1976-1980, Reported	1981-1985, Reported	1986-1990, FYP
Total residential floor space	Millions of m <sup>2</sup>	-17.5	+24.9	+80.0
Preschool institutions	Thousands of places	+577	+3	+1545
General public schools	Thousands of places	-1282	-1487	+2140
Hospitals	Thousands of beds	-22	-6.1	+60
Outpatient and polyclinic institutions	Thousands of visits per shift	+2.7	+59.4	+248

We need to add to this that in the present 5-year period the plan is being overfulfilled for all the items indicated in the table.

I think hardly any critics will be found of such clear social tendencies; it is important not only to repeat them in the 13th FYP, but even to strengthen them.

Of course, to support these shifts in the social sphere there has to be a vigorous and organized bolstering of construction facilities in all regions, and the problem has to be solved of augmenting the production of building service and utility equipment, sanitary fixtures and plumbing supplies, and the most up-to-date materials.

More about a fundamental feature of the current 5-year plan. This is the intensification of social production along the entire front, even though it has not been

entirely realized in practice. But there have been real shifts here. For instance, satisfaction of the need for physical resources was in previous years covered mostly through extensive growth of their production. In the 12th FYP, the problem was posed and solved, although with great effort, of achieving a growth of consumption of fuel, power, raw materials, and metal at least 60-65 percent, and for certain types 100 percent, by virtue of their conservation. Provision has also been made for bringing the inexhaustible stocks of secondary resources into circulation. As a result, it was possible during the 5-year period to stabilize the production of a number of raw materials.

The turn toward qualitative parameters in economic development led to the possibility of orienting the 5-year plan toward higher indicators than in previous periods for reduction of the materials intensiveness of social



production and the metals intensiveness and energy intensiveness of the national income.

In spite of the difficulties that exist, the physical resources being made available from the production sphere are bringing about ever more favorable conditions for the economy's reorientation toward the social sector.

Which accounts for the necessity of accomplishing major transformations in the structure of the economy and its sectors and for improvement of the basic macroeconomic proportions. To be sure, with respect to many such parameters we have today an appreciable lag behind the 5-year plan, which has resulted mainly from delays in retooling the existing potential on the most up-to-date scientific-technical basis.

Everything we have talked about represents from the standpoint of multiannual planning a stage of our development that is already departing, although the 2 last years of the current 5-year planning period are carrying an immense load of the transitional period and are laying a real foundation for further improvement of production relations and development of the productive forces. And, of course, it is important to realize in the next 5-year planning period all the new and progressive conceptions which have not been realized in this one.

The 13th FYP must be based on the progressive attainments and achievements of the 12th that have been confirmed by reality, on all the elements of the radical economic reform, and that is why it will neither be an improved copy nor a modernized repetition of it. The road to it begins with socioeconomic forecasting and multiannual planning.

The country's multiannual plan is becoming a comprehensive and rather complicated document, a document which pursuant to the USSR Constitution must go through the democratic process of examination and approval. The reference here is to the draft of the Conception and the Basic Directions for Economic and Social Development of the USSR in the 13th FYP and the Period up to the Year 2005. This long-range plan contains more detail and accuracy of the production-economic calculations and organizational proposals for the period 1991-1995. And for the period 1996-2005 it contains more approximate and conceptual targets. This document was drafted on the basis of scientific socioeconomic and engineering-technical forecasts and comprehensive programs so as to take into account the foreign economic and international situation that is taking shape. Out of a series of possible alternatives or, as it is now fashionable to say, "scenarios," of economic development, a social-oriented version has been adopted for detailed workup and examination at the level of the government administration. In the work on this version that followed, its social orientation was consistently strengthened on the basis of a search for an additional increase in the efficiency of social production, scale

conversion in the defense branches of industry, restructuring of economic relations in the agricultural sector, and further improvement of the economic mechanism in the context of initial realization of the set of related measures for gradual financial recovery of the national economy.

The Conception and Basic Directions... mainly comprise the principal national socioeconomic objectives and also the most important ways and means of achieving them both in the next 5-year planning period and also over the longer range. Realization of those objectives should take our state toward a socially oriented economy with a higher degree of organization and efficiency, with a well-adjusted and constantly improving economic mechanism, which will guarantee everyone a high level of prosperity.

The set of interrelated national goals includes, for example, such objectives as overcoming the deformations that have occurred in development of socialist production relations, consistent democratization of the life of society, guaranteeing a high level of consistency among social, structural, scientific-technical, investment, agricultural, economic, regional, finance-and-credit, and foreign economic policies of the state. Management of the economy will continue to be improved toward solving the problems of continuous qualitative improvement of the structure of the national economy and improvement of its efficiency in every way.

A beginning has been made already on shaping and realizing those goals in the current 5-year planning period. The main practical load is being placed on the 13th FYP. A continuous effort will be needed from now on to accomplish them.

The quantitative expression of these goals are contained in the summary socioeconomic indicators at the level of the national economy, in the general-economic and social proportions, and in the most important indicators reflecting development of the union republics.

It is advisable, quite naturally, to indicate in consolidated form those qualitative targets which are to be achieved on the basis of scientific-technical progress. And also the quantitative parameters that lie at the basis of the continual functioning of the economy over such an immense territory with such widely differing levels of efficiency and prosperity from region to region as well as differing climatic conditions. Consideration will be paid to the specialization of the social production of the union republics in keeping with their natural, climatic, and national historical peculiarities, which objectively necessitates that all these factors be linked together in the development of the unified national economic complex.

Based on the practical experience of the current 5-year planning period, macroeconomic calculations, the data of the intersector balance, and all other materials of the Conception and Basic Directions... pertaining to the

13th FYP, an effort has been unfolded to prepare the system of state taxes, standard economic rates, charges, financial benefits, and penalties. The effort is continuing to shape a system of new state prices and rate schedules set centrally so as to take into account the observations of the public. The foundations of a new credit policy are being worked out, above all in the construction complex (interest rates on loans, procedure for use of long-term and short-term credit resources, and other measures). These powerful economic regulators of economic development are being defined in linkage with the main national goals and so as to take into account the creation of broad opportunities for development of commodity-money relations, the functioning of differing forms of ownership, and also socialist markets for consumer goods, the means of production, securities, and, to some degree, a market for labor resources.

Thus, study is being given simultaneously to the problems of developing the productive forces, the social reorientation of the economy, and further improvement of production relations on the basis of fundamentally new approaches to a plurality of forms of ownership and to the emergence of a socialist market. It is precisely the systematic nature of such an approach, the comprehensiveness of the coverage of all problems, that will make it possible to prepare the country's long-range plan—without ascertaining in advance detailed volumes, and also in combination with the main economic levers.

The Conception and Basic Directions... must shed clear light on the "human factor." It is after all because the economy is turning to the needs of the people that there will be a full-fledged growth of people's economic and social activity. Even in the stage of the long-range plan which is what the Conception and Basic Directions are, it must be pointed out that capital investments in man yield a social benefit and visible economic benefit we so much need. And in the final analysis this will exceed the temporary restrictions on the reconstruction and modernization of production in certain branches of heavy industry and transportation and also the reduction of capital investments in production facilities.

But balanced approaches are necessary in the highest degree here. We must avoid what is called "overheating of the economy," when the development of the manufacturing and other branches of Department II of social production are not sufficiently reinforced by heavy sectors producing means of production. And this has already happened in a number of socialist countries as the transition was made to economic methods of management.

On the whole, the upcoming 5-year planning period must also create a reliable foundation for the country's socio-economic development in subsequent periods with targeted orientation toward achievement of a qualitatively new state of Soviet society. Alternative versions may unquestionably be worked out here. And then the strategy of the 13th FYP will be defined as an organic

part of the Conception and Basic Directions of Economic and Social Development Over the Period up to the Year 2005. Every problem, however urgent it might be, must be solved in close relation to other problems and processes, to a comprehensive assessment of the possible economic, social, and ecological consequences. Only by realistically comparing the results desired and the capabilities of the economy, assuming, of course, the most efficient use of all resources, is it possible to make really appreciable progress in the country's socio-economic development.

### New Planning Approach Needed

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in Russian No 28, Jul 89 p 5

[Article by V. Gab, sector chief in the Economics Scientific Research Institute of UkSSR Gosplan, candidate of economic sciences: "Social Saturation and Internal Consistency of the Plan"]

[Text] It was a rare speaker in the USSR Congress of People's Deputies who did not touch upon the issue of our economy's social reorientation. In that context, it is very important to find correct approaches to changing planning methodology.

It would seem that the question can be put this way: What is the social significance of increasing the mining of ore or the extraction of petroleum, of increasing the production of pig iron, steel, machine tools, and so on? The answer might be this: If ultimately the needs of man are better satisfied, this means that the additional tons of steel or coal is a good thing.

But let us try to put the question in concrete terms: To what extent and at what rates must these volumes grow in order to take on social significance? On the one hand, for the product produced to fully promote a rise in the people's standard of living and on the other for its production to be the most efficient. After all, against the background of our confronting more and more frequently a situation in which certain products (certain makes of tractors, combines, and so on) are not selling, many consumer goods are not in demand because of their low quality, even though the shortage is increasing.

This situation is the result of miscalculations occurring because the methods of working out the plan are imperfect methods.

It is well-known that the plan for the 12th FYP was drafted on the basis of the "old" methods. And it has to be acknowledged that this set of methods has come into contradiction with the present-day tasks of society's development, since it has begun to undermine the basic principle of scientific planning—internal consistency and proportionality of development. The previous planning practice did not fit into the system of economic methods of management. When the Law on the Enterprise took effect, envisaging as it does independent drafting of the plan from below, this problem was

compounded still more. But at the top levels of management (in USSR Gosplan, in the gosplans of the union republics, and ministries and departments), there are still no reliable methods making it possible to plan the most important proportions and rates of development, to determine the order of priorities and the sequence of their realization within the established time frame.

Just one example of this kind. No one has any doubt about the priority development of machinebuilding. Realization of this priority in the plan for the 12th FYP required a nearly twofold increase of capital investments. But the years that have passed show that that volume of capital investments is not being fully assimilated, and this also applies to certain heavy sectors (machine tool building, the electrical equipment industry, etc.) which account for technical progress within machinebuilding itself. What is this if not the result of a lack of internal consistency and proportionality in the plan?

New questions logically arise: Why was the increase in capital investments included in the plan precisely twofold, and how was this determined? Is this increase in the volume of capital investments sufficient for attainment of the ultimate (social) objectives in the 12th FYP and over the long-range period? In other words, what is the social and economic significance of those outlays? After all, capital investments which have not been assimilated are direct losses of resources.

Specialists know that preplan workups and calculations are only the basis for expert assessment and quantitative expression of the most important proportions and internal consistency of development. It is no accident that a sharp discrepancy should arise between the money and physical flows—this is a phenomenon that characterizes the basic problem of the internal inconsistency of a plan, that is, the money resources are not backed up with physical resources, equipment, capacities of construction organizations, and so on.

The plan for the country's economic and social development in 1989 is from the methodological standpoint and in its form and content more oriented than ever before toward performing the priority social and economic tasks, toward achievement of progressive proportions between production and consumption, and toward observance of priorities. Nevertheless, a number of negative trends has not only not been slackening, but has indeed become stronger, and the lag behind the 5-year plan that occurred in 1986 and 1987 has not been overcome.

We are entitled to put the main question in this connection: After the transition of all enterprises and organizations to full cost accounting (khozraschet) and self-financing, how will an internally consistent and socially oriented plan be drafted for the 13th FYP so as to guarantee proportional development of the national economy?

In our view, a solution to this problem is possible along the following lines.

First, we have to plan the rise in the standard of living of the workers, expressing it not only in value terms, but also physical terms, separately breaking down the per capita growth of consumption of goods and services over the base period. The rise in the standard of living in consolidated form can be reflected by consumption groups: food, clothing, footwear, housing, articles for personal hygiene, everyday services, education, health care, the environment, culture, athletics, and so on. We naturally need to scientifically substantiate progressive rates of consumption of each group of commodities and services; to differentiate within each group the principal goods and services and to determine their optimum mix, to determine the actual and planned rates of consumption (over the particular period) and the forecast consumer demand; and to take into account the growth of the population during the period covered by the plan.

Our point of departure in establishing the planned standard rates (taking into account the structure of consumption in each group) should be based on society's priorities and capabilities that have been determined.

The most complicated problem in this section of the plan is to work out and link the value indicators and physical indicators and the planned standard rates of consumption. In the first stage, it is possible to concern ourselves with the planned standard rates, ultimately establishing them so as to take into account the resources that exist during the particular period, which is done by means of iterative approximation. The difference between the actual and planned consumption will reflect the goal for the planning period in each group (in value and physical terms) and for the standard of living as a whole (in value terms).

Let us go further. The deep-seated stereotype as to the priorities of sectors and branches needs to be broken up once and for all. The strengthening of the social orientation of plans requires a different "ranking table" of the sectors and branches. The nonproduction sphere, the food industry, light industry, that part of agriculture producing products that go from field to store, and machinebuilding production groupings making consumer goods must go into the first place. Taking the real condition of those branches and production groupings into account, we need to determine the rates and proportions of their development in the planning period so that they are linked to the production of goods and the volume of services set down in the section of the plan that has to do with the standard of living of the workers.

The next stage in planning must be to determine the rates and proportions of development of the raw materials, resource, and machinebuilding branches, which have to be linked to the rates and proportions of development of the branches and production groupings manufacturing the end product by virtue of which the rise in the standard of living is accomplished.

Ultimately, in the national economy as a whole it is possible to shape intersector relations making it possible to influence the growth of the volume of goods and services by groups directly related to raising the standard of living of the workers. Horizontal intersector relations to guarantee the functioning of each level of production make it possible to discover disproportions in the actual support of each of them with materials, energy and labor resources, machines and equipment, and to plan the conjugate development of production capacities.

The disproportions in the new economic conditions discovered in this way can be equalized by placement of the state order, which in our view is the main function of the entities for management of the economy.

The regrouping of goals and priorities also requires working out standard rates of resources for consistent intersector consumption of the products of various sectors and branches as a function of their subordination and ultimate goals.

The information generated by working out those rates provides the basis for determining the required volumes of each product. This information can and must be used to work out and monitor wholesale and resale prices for all products and to determine the priority directions in capital construction. What is more, this kind of information will make it possible to discover the most technically backward production groupings and to show the directions in which the advances of science and technology should be applied first.

On the whole, this methods approach will make it possible to give maximum consideration to social goals, to arrive at what might be called "national economic technologies" for raising the standard of living of the workers, and to instill a social purpose in the volume and quality of the product produced or the service rendered in all spheres, branches, and specific production groupings in the country's national economy.

In the process of drafting the plan in accordance with the proposed methods approach, it is possible to envisage demonopolization of certain production groupings in order to improve the quality and level of competitiveness of the product produced. At the same time, in view of the regional aspect of planning and development of interregional cost accounting, which envisages the principle of self-support of regions, the planning of specific goods and services at higher levels of management (the union and republic levels) must be confined only to that list of products which cannot be produced entirely at the local level. This predetermines drafting a plan from below which will make it possible to take into account the specialization of the regions in satisfying republic and union needs.

In the transitional stage, when the socialist market has not yet been developed and is not a regulator of the rates and proportions of development of the various sectors and branches, this methods approach can play a constructive role.

## INVESTMENT, PRICES, BUDGET, FINANCE

### 'Unreliable' Price Statistics Distort Return On Investment

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[Article by G. Khanin, Candidate of Economic Sciences and head of a Laboratory for Complex Socio-Economic Problems of the Tuvinskiy Complex Department of the Siberian Branch of the USSR Academy of Sciences, Kyzyl: "On Evaluating the Volume and Dynamics of Fixed Productive Capital"]

[Text] As a result of objective conditions (multiplicity and diversity of output, fixed capital, their qualitative differences and others) and subjective factors (relatively weak development of the methods for analyzing and planning reproduction in a physical-material expression), the cost expression for the reproduction process, which, owing to its compactness and general nature possesses obvious advantages compared to the physical-material form for analysis and planning, predominates in the practice of planning and general economic analysis.

The above statement imposes high requirements upon statistics and the planning of prices. In a dynamic economy, a stable wholesale price level, even with planned regulation, still remains the ideal. The history of Soviet economics underscores the fact that relative price stability has been observed in it only during rare and extremely brief periods. A change in the overall price level in the national economy must take place and is taking place not only under special historical conditions or as a result of mistakes that were tolerated (although beyond any doubt these factors should never be ignored); here the problem has to do first of all with the fact that it was caused by normal economic development. This very obviously emphasizes the vital need for objective and reliable price statistics. If such are not available, then it is unrealistic to expect an accurate reflection of the cost indicators for the true reproduction process.

Regrettably, a well known fact must be repeated: price statistics in our country belong, if you please, to the least reliable element of statistical practice. True, during the 1920's this area of statistics developed rather successfully. But wholesale price statistics were generally eliminated in the late 1920's and restored only after 30 years had elapsed. Retail price statistics existed just as in the past, but in a form that had been revised considerably. Under such conditions, no solid ground remained for scientific work in price statistics and considerable losses were sustained in skilled specialists and practical workers.

Changes are being reflected for the most part in a broad range of products in wholesale and retail price statistics. As is known, these changes are being carried out only over large intervals of time and in connection with the

price reform. Meanwhile, the replacement of products is continuing unabated and it is bringing about more substantial changes in the price level. We can consider as typical a situation in which success is not realized in achieving a proportional change in the quality characteristics for products and prices. In the face of all this, the changing portion of the nomenclature for national economic output is for all practical purposes not covered by price statistics and this is causing its insufficient reliability.

Confronted by such a situation, the economists who were striving to achieve a skilful analysis were forced to turn to the natural indicators for reproduction. With a proper selection of the latter, the conclusions turned out to be considerably more sound than when use was made of the current cost indicators. Nevertheless, even the best indicators in the sense mentioned (for example, those associated with electrification of the national economy—electric power consumption, power ratings of electric motors and others) still have serious shortcomings. For example, in the consumption of electric power a change in its quality is not being taken into account; the power ratings of electric motors cannot be considered as being directly proportional to the productivity of the equipment. Everything points to the fact that the task of building a reliable system of cost evaluations for reproduction remains an extremely urgent problem.

The overall shortcomings of the cost evaluations for the indicators of reproduction apply fully to an evaluation of the cost of fixed capital. The basic requirement here—conformity between an evaluation of fixed capital at each given moment and an evaluation of the remaining elements of the social product. Both of these evaluations must be given using the same ruble and monetary units of identical purchasing power. Only if this condition is met does it make economic sense to compare the individual phases of fixed capital circulation against the reproduction process for social product. Since the price levels for invested goods change, a disparity arises periodically between an evaluation of fixed capital according to the prices at which they were acquired (initial cost) and their physical volume.

All of the cost proportions of reproduction are dependent upon a correct evaluation of the fixed productive capital: the ratio between the replacement capital and national income, output-capital ratio, the proportion of amortization in the cost of the social product and in the production costs for products of the national economy, this production cost itself and the amount of surplus product, the proportion of the savings fund in national income, fixed capital depreciation and the ratio between fixed and working productive capital. In other words, the potential for uncovering the true character of the reproduction process is dependent upon an evaluation of the fixed capital.

For example, let us assume that an evaluation of fixed capital declines compared to its replacement value (level

of current prices). In this instance, the volume of amortization deductions, the reimbursement fund and the production cost for social product all turn out to be lowered and, conversely, the volume of surplus product and the savings fund are inflated. It may appear that on a cost basis the values for surplus product and the savings fund are rather high and yet they are actually considerably lower (according to their replacement value).

If the prices for invested products grow more rapidly than that for the entire social product, the level and dynamics for the output-capital ratio are artificially lowered. Moreover, those branches of the national economy the product prices of which (between price reforms) grow more slowly will find themselves in an especially unprofitable situation: the mining industry, agriculture, railroad transport, ferrous metallurgy, construction materials industry and others. Hence, a distorted notion is created concerning the dynamics on the effectiveness of use of fixed productive capital in some branches of the national economy. With growth in the prices for investment goods, despite economic logic, the best technical-economic indicators are often found at old enterprises, where the price level for fixed capital is low, and the worst indicators—at new enterprises which were built during a higher level for these prices. Such a situation arouses understandable doubts with regard to the advisability of introducing new equipment into operations at enterprises.

It is obvious that the mentioned shortcomings in economic indicators could be eliminated by calculating all of the reproduction elements in fixed prices. Such practice is being employed extensively in the statistics of many countries. However, in our country, it is developed only weakly owing to irregularities in the price statistics and it generally is not being used for evaluating the dynamics of fixed capital. In order to bring an evaluation of fixed capital into conformity with the overall price level in the national economy, we are carrying out a revaluation of fixed capital according to its replacement value. Such a measure, undertaken periodically, is considerably inferior to a systematic calculation of the volume of fixed capital in fixed prices. A revaluation of fixed capital is extremely complicated and, as a result, rather rare. Moreover, an objective evaluation of the reproduction process is possible only during years in which revaluations are conducted or in periods directly following them. It is difficult to establish the dynamics for the output-capital output ratio on the whole and for individual branches of the national economy.

The existing limited opportunities for a revaluation of fixed capital are dependent not only upon their frequency but also upon quality. When there are extended interruptions between revaluations, an objective analysis of the reproduction processes, one which encompasses a large period, is practically impossible. Similar results are obtained from formal revaluations according to replacement value when its quality is low.

An analysis of fixed capital revaluations carried out in our country reveals that quite often both of the mentioned shortcomings were present. The first general revaluation of fixed capital in industry was carried out in 1925. Throughout this period, which extended from the moment of the October Revolution to 1925, fixed capital was evaluated according to the initial value and mainly in pre-revolutionary rubles, although the overall price level has changed considerably since that time. In other branches of the national economy, the revaluation process was dragged out until the end of the 1920's.

During the 1930's and 1940's, as is known, an exceptionally rapid growth in prices took place. Thus the retail prices during the 1928-1950 period increased by a factor of roughly 12. The wholesale prices also increased, albeit somewhat more slowly. However, the revaluations of fixed capital according to replacement value were carried out in a spasmodic manner during this period and encompassed only individual (more-over secondary) branches of the national economy or individual territories.

Immediately following the Great Patriotic War, for the purpose of improving analysis of the reproduction process, USSR Gosplan carried out (obviously based upon an earlier revaluation conducted in occupied regions) an evaluation of fixed capital according to its replacement value (in 1945 prices). According to the USSR Gosplan evaluations, the country's fixed capital before the war (in 1945 prices) amounted to 1,040,000,000,000 rubles,<sup>1</sup> while at the same time the initial value (less livestock) amounted to 360,000,000,000 rubles,<sup>2</sup> or less by a factor of almost three.

Within the framework of preparations for the general inventory of fixed capital planned for the early 1950's, a revaluation of the fixed capital of state enterprises for agricultural flour-milling of the USSR Ministry of the Food Industry was carried out on 1 January 1952. As a result, the replacement value of the fixed capital exceeded their initial value by a factor of 2.4<sup>3</sup> and this was to serve as a well known reference point for this ratio and for the entire national economy in the early 1950's.

Such eminent specialists in this field as Sh.Ya. Turetskiy and Ya.B. Kvasha emphasized the considerable underestimate made concerning fixed capital in the late 1950's. Sh.Ya. Turetskiy considered this underestimate to be on the order of several times;<sup>4</sup> Ya.B. Kvasha noted

that in 1956 the replacement value for fixed capital in industry exceeded its initial value by a factor of 1.5.<sup>5</sup>

The mentioned experimental computations for revaluating fixed capital and the opinions of well known experts in this field can serve as rather convincing testimony of the fact that a very large gulf separated the initial and replacement values for fixed capital in the late 1950's.

The next revaluation of fixed productive capital was carried out for the purpose of determining their replacement value only in 1960, that is, 30 years following the previous one. This action was preceded by complicated preparatory work. The economists hoped that a revaluation of the fixed capital would make it possible to uncover their true value. However, the results were surprising: the replacement value for the fixed capital of the national economy turned out to be only several percentage points higher than the initial value. Serious doubt existed with regard to the reliability of these results.<sup>6</sup>

For an approximate evaluation of the quality of the 1960 revaluation of fixed capital, let us compare the specific capital investments and capital-output ratio for relatively similar branches of the national economy. We make no claim as to the accuracy of such a comparison, since the periods compared do not coincide (the entire 6th Five-Year Plan was adopted for the purpose of capital investments, since during some years irregularities are being observed in the placing in operation of productive capabilities). In addition, there is a difference in the structure of the capital being placed in operation and that already in operation (for example, in the proportion of open pit and shaft methods for the mining of coal, thermal and hydroelectric power stations); a certain portion of the capital investments is not being included in fixed capital structure and so forth. However, such a comparison is quite proper for determining the system of values. Moreover, the expert use of productive capabilities in industrial branches is on the order of 90 percent. Specific capital investments are computed by dividing the volume of capital investments for a five-year plan for the placing in operation of productive capabilities and the capital-output ratio—by dividing the volume of fixed capital in 1960 according to the replacement value for the branch's productive capability. The results of the comparison are furnished in Table 1.

**Table 1. Comparison of Specific Capital Investments and Capital-Output Ratio\***

Branches	Volume of capital investments, billions of rubles	Placing in operation of productive capabilities, approximate units	Specific capital investments, rubles	Volume of fixed productive capital, billions of rubles	Productive capabilities, approximate units	Capital-output ratio for products, rubles
Electrical engineering	6.92	28.0	238	9.6	66.7	143
Coal industry	5.26	127.0	41.0	7.0	565	12.4
Ferrous metallurgy (rolled ferrous metals)	4.4	10.5	419	7.7	48.5	159

\* Volume of capital investments: "Narodnoye khozyaystvo SSSR v 1961" [USSR National Economy in 1961], Moscow, 1962, p 545; Placing in operation of productive capabilities: "Kapitalnoye stroitelstvo SSSR" [USSR Capital Construction], Moscow, 1961, pp 137-139; Volume of fixed productive capital: "Narodnoye khozyaystvo SSSR in 1960" [USSR National Economy in 1960], Moscow, 1961, pp 86-87; Productive capabilities in 1960: "Narodnoye khozyaystvo SSSR in 1980," Moscow, 1981, pp 141, 143, 144.

As revealed by the data in Table 1, the specific capital investments in the three most important branches of heavy industry during the 6th Five-Year Plan exceeded the corresponding capital-output ratios by a factor ranging from 1.66 to 3.33, computed based upon the results of the 1960 revaluation. The difference by branches was associated mainly with the rates for their development: in those areas where they were higher, the proportion of new fixed capital was also higher. On average for the three branches, the specific capital investments exceeded the capital-output ratio by a factor of 2.63.

Since the traditional cost evaluations were not well-founded for analyzing the development of the national economy and its individual production cells, the author of the mentioned article developed alternative evaluations of the activity of production cells of the national economy. The chief peculiarity of these evaluations lies in the fact that they are based upon data on production development that is not very susceptible to distortions—either owing to a lack of interest on the part of the enterprises or because of more strict responsibility for distortions. Such indicators, when evaluating production dynamics, include for example the volume of production output in physical terms for industry, electric power consumption, the production costs for products being compared, the ratio between a change in the power-worker ratio and labor productivity in industry in the U.S.A. and others.

Relatively reliable primary indicators were also found in other branches of the national economy, indicators which arouse doubt as to the trustworthiness of the traditional general indicators for production dynamics (in construction and motor vehicle transport). Based upon this relatively reliable initial data, several methods were defined for alternative evaluations of the output dynamics for individual branches of the national economy and national income.<sup>7</sup> Thus, six alternative evaluations were computed for industry and for construction—three, and so forth. The final alternative evaluation was defined as the average of the individual alternatives

The alternative evaluations for output dynamics for machine building and construction made it possible to

compute roughly the price index for invested goods. Moreover, it was assumed that discrepancies between the output indices for machine building and construction in the traditional and alternative evaluations were associated with growth in the prices for invested goods that were not taken into account by the statistical services. Based upon data on capital investments in material production and on the degree of withdrawal of fixed productive capital, an age structure was defined for fixed capital in 1980 according to the initial value. Thereafter, using computed price indices for invested goods by periods during the 1928-1960 time-frame, we carried out a revaluation of the fixed productive capital from the initial value into the replacement value (in 1960 prices). The computed amount for the replacement value of the fixed productive capital turned out to be greater by a factor of 1.8 than that based upon data from the 1960 revaluation. Such a result agrees very well with the other evaluations cited above.

Nor were the shortcomings noted in the general 1960 inventory of fixed capital eliminated during the revaluation carried out in 1972, that is, 12 years later. Just as in 1960, it turned out that the replacement value of the fixed capital, as a result of the revaluation, only exceed the initial value to a negligible degree, despite the fact that the evaluation of replacement value in 1960 was lowered and in the 1960's we saw a continuation of the growth in prices for invested goods.

The low estimate for the replacement value of fixed productive capital led to an erroneous conclusion with regard to the nature of the productive processes in the USSR. The volume of surplus product created was inflated and the volume of the reimbursement fund—lowered. The amounts for the fund for production savings and the dynamics of the production capital investments turned out to be more realistic.

We computed the dynamics for the fixed productive capital for 1928-1985 based upon the true replacement value for the fixed productive capital and an alternative evaluation of the volume for their introduction into operations and wear and tear, computed with the aid of price indices for invested goods. The average annual rates for their growth were as follows: 1928-1941—5.3

percent; 1941-1950—2.2; 1951-1960—5.5; 1961-1970—4.4; 1971-1975—4.0; 1976-1980—2.0; 1981-1985—0.6 percent.

Certainly, these computations lay no claim to absolute accuracy and cannot replace the data of statistical organs based upon more accurate or extensive initial information. However, they nevertheless furnish an approximate picture of the dynamics of fixed productive capital. The maximum rates of growth for fixed productive capital were achieved during the pre-war period. During the 1950's and the first half of the 1960's, these rates continued rather high and thereafter, in connection with a weakening of investment activity and an increase in the amount of fixed capital depreciation to the extent that their volume increased, their growth (taking depreciation into account) slowed down sharply.

Based upon alternative evaluations of the dynamics of national income and fixed productive capital, we computed the index for output-capital ratio for individual

periods: 1928-1941—0.77; 1941-1950—0.93; 1951-1960—1.17; 1961-1970—0.88; 1971-1975—0.97; 1976-1980—0.95; 1981-1985—1.00

The first periods presented here covered the creation of the industrial base for the Soviet economy. Thus, a considerable reduction in the output-capital ratio took place in connection with the difficulties involved in reorganizing its structure, insufficient experience in economic management and the peculiarities involved in a change in the output-capital ratio during the period devoted to replacing manual labor with mechanized labor. A substantial increase in it was noted during the 1950's in connection with improvements in personnel skills, the acquisition by them of experience in managing the socialist economy and the substitution of mechanized labor for manual labor in many sectors of the national economy. A reduction subsequently took place in the output-capital ratio. The results of a comparison of the traditional and alternative evaluations of the dynamics of the output-capital ratio during the 1960's and 1970's are presented in Table 2.

Table 2. Comparative Evaluation of the Indices for Output-Capital Ratio\*

	1961-1970	1971-1975	1976-1980	1981-1985
Alternative evaluation of index for output-capital ratio	0.88	0.97	0.95	1.00
Traditional evaluation of index for output-capital ratio	0.84	0.86	0.86	0.86

\*"Narodnoye khozyaystvo SSSR 1922-1972" [USSR National Economy 1922-1972], Moscow 1972, p 49; "USSR National Economy in 1980, Moscow, pp 41,43.

It is apparent from Table 2 that the drop in output-capital ratio during the period analyzed turned out to be substantially less, especially during the 1970's, than that obtained using the traditional evaluations. A more precise definition of the dynamics of output-capital ratio makes it possible to explain in a more valid manner the drop in the rates of economic growth which took place during the 1960's and 1970's. This is usually explained for the most part by a reduction in the output-capital ratio. Meanwhile, such an explanation is accurate only for the 1960's. During the 1970's, the reduction in the rates of economic growth took place mainly as a result of a reduction in the rates of growth in fixed productive capital and only to a minor degree—owing to a deterioration in their use. Certainly, this statement of fact must not lead to an understatement of the available reserves for raising the output-capital ratio. Indeed, during the 1961-1980 period it also fell according to the alternative evaluations by a rather impressive amount—by 19 percent. Moreover, by the end of the 1950's, large reserves were available for improving the use of fixed productive capital. However, it should be pointed out that a slowing down in the growth in fixed productive capital is more and more becoming an obstacle in the path of further economic growth. This applies in particular to branches which have achieved a high level of use of fixed capital—such as electrical engineering, ferrous metallurgy, railroad transport and others.

An unsound evaluation of the volume and dynamics of fixed productive capital inhibits an evaluation of the operations of individual branches, ministries and enterprises.

For example, let us take such large branches of industry as ferrous metallurgy and machine building. According to the traditional evaluations, the output-capital ratio in ferrous metallurgy decreased by threefold during the 1956-1908 period, while it increased by a factor of 1.5 in machine building. However, such dynamics are in conflict with existing data on the dynamics for the use of equipment in physical terms. For example, the principal equipment in ferrous metallurgy (blast furnace and open hearth) was utilized better during this period. At the same time, it is generally well known that the coefficient for shift work in machine building declined during the period under discussion.

A check carried out on the index for output-capital ratio according to alternative evaluations revealed that the output-capital ratio in ferrous metallurgy did not decline and that it increased only negligibly in machine building. Meanwhile, owing to a sharp drop in the output-capital ratio, registered on the basis of traditional evaluations, conclusions were repeatedly drawn regarding the exceptionally poor work of ferrous metallurgy regarding the use of fixed capital and capital investments; the latter were curtailed in this branch. It should also be noted that the secret behind such a sharp deviation in the dynamics



of the output-capital ratio in ferrous metallurgy and machine building according to the traditional evaluations is a simple one: at a time when it was easy in machine building to compensate for an increase in prices for fixed capital through inflated prices for equipment, in ferrous metallurgy such a possibility was practically non-existent.

The very widespread opinion regarding a deterioration in the conditions for obtaining raw material resources as a factor in the deceleration of the rates of economic growth during the 1960's and 1970's is deserving of reinterpretation. Such an opinion is based upon considerable growth in the production costs and capital-output ratio for a majority of the types of raw materials during this period. However, in these branches the capital-output ratios and production costs are dependent to a considerable degree upon an evaluation of fixed capital, since amortization expenditures are usually important items in the production costs of the raw material branches. When we produced an evaluation of the dynamics of fixed capital in the fuel branches according to the alternative evaluations, it turned out that the capital-output ratio in these branches declined noticeably during the 1960's and 1970's. There is every reason to assume that a decline took place in the real current expenditures for obtaining products, since they decreased in terms of the two principal items of production cost—wages and amortization. Moreover, it should be borne in mind that when use is made of the real replacement value of fixed capital, the amortization proportion of the production costs of raw material branches must increase considerably, a factor which reveals to a greater degree a tendency towards a reduction in current expenditures.

Clarification of the actual amount of replacement value for fixed productive capital and their dynamics is making it possible to determine more accurately the amount of surplus product in the national economy. From the standpoint of the reproduction process, a great amount of interest is being displayed in the values for profit volume and profitability, since it is mainly profit that serves as the source for financing expanded reproduction. True, its role has been modified somewhat over the past 25 years in connection with a change in the ratio between the profit volume and turnover tax in the national economy. Compared to the beginning of this period when the turnover tax exceeded to a considerable degree the volume of profit, by the end of the period the ratio was just the opposite. Thus the profitability level cannot serve as a characteristic of the sources for financing expanded reproduction, but (with use being made of fixed prices) it can reflect a change in production effectiveness and appear as a characteristic of the relative potential of expanded reproduction.

A simple correction to the profit volume in connection with a more precise definition of the replacement value of the fixed productive capital is making it possible to draw the conclusion that the traditional evaluations of the amount of surplus product and the profitability level

have been exaggerated considerably. For example, in 1960 the profit volume in the USSR national economy amounted to 25.2 billion rubles,<sup>8</sup> which in a comparison against the value for the fixed productive capital and working capital (173 billion rubles<sup>9</sup> and 73 billion rubles<sup>10</sup>, in all 246 billion rubles) provides a rather high profitability level—approximately 10 percent. However, if we reevaluate the value of the fixed productive capital and accordingly increase the volume of amortization deductions, the volume of the latter increases from 9 billion rubles to 16 billion rubles, the profit declines to 18 billion rubles, the value of the productive capital increases to 382 billion rubles and the profitability amounts to only 4.5 percent. As you can see, a more precise definition of the volume of replacement value for fixed productive capital makes it possible to draw the conclusion that in the late 1950's the relative potential of expanded reproduction was considerably less than that for traditional evaluations, although following the correction that was applied the amount of profitability was rather considerable.

In 1980 the profit volume amounted to 116 billion rubles,<sup>11</sup> productive capital—1,327 billion (fixed productive capital 1,004 billion<sup>12</sup> and material working capital 323 billion rubles) and the profitability level in the national economy—approximately 9 percent. In 1980, the volume of amortization deductions amounted to 72 billion rubles.<sup>13</sup> Taking into account the replacement value of the fixed productive capital (according to computations carried out, it exceeded the initial evaluation by a factor of 1.7), the overall value of the productive capital amounted to 2,000 billion rubles, the profit volume declined to 56 billion rubles and thus the profitability level amounted to only 2.8 percent. Since a portion of the profit is used for issuing material awards to workers and for financing social expenditures, the actual level of the relative potential for expanded reproduction turned out to be even lower.

An analysis of the causes of distortions in the data for the volume and dynamics of fixed productive capital and their consequences, for the purpose of a high quality description and planning the reproduction process, makes it possible to determine the methods for improving the means for measuring the volume and dynamics of fixed capital.

First of all, a need exists for an urgent reevaluation of them: indeed, 14 years have already elapsed since the last reevaluation. True, a new inventory of fixed capital is planned, but as yet neither the schedules for nor the nature of this inventory are clear. Thus there is no confidence in the fact that we will succeed in avoiding the crude mistakes tolerated during the two previous reevaluations.<sup>14</sup> It will obviously be difficult to avoid lowering the amount of replacement value for the fixed productive capital if the determination of it is left to the enterprises themselves. Thus the principal work associated with such reevaluations must be concentrated in the central statistical organs (such a recommendation was made during the 1960's by Ya.B. Kvasha). Assisted by

skilled specialists and following a thorough study, the coefficients for converting over from the initial value to the replacement value, with the age of the capital being taken into account, should be determined for each type of fixed capital. In the process, a certain inevitable shortage in the specific characteristics governing the condition of the fixed capital at enterprises is considerably less harmful than willful distortions.

Secondly, a systematic accounting of the dynamics of fixed productive capital requires the organization of true price statistics for invested goods and, on this basis, a reevaluation in fixed prices of the placing in operation and retirement of fixed capital. Centralized computations of their dynamics can be carried out for individual branches of the national economy and ministries and thereafter—for the enterprises of individual ministries, while taking into account the general economic coefficients for converting over from current to fixed prices.

#### Footnotes

1. See N.A. Voznesenskiy. "Izbrannyye proizvedeniya" [Selected Works], Moscow, 1979, p 453.
2. Computed based upon the volume of fixed productive capital for USSR industry prior to the beginning of 1941, in the amount of 92 billion rubles (see "Istoriya sotsialisticheskoy ekonomiki SSSR" [History of the Socialist Economy of the USSR], Moscow, 1978, Vol. 5, p 53) and the proportion of industry and construction in fixed capital in the amount of 25.6 percent (see "Narodnoye khozyaystvo SSSR in 1958", Moscow, 1959, p 58).
3. P.G. Bunich. "Pereotsenka osnovnykh fondov" [Revaluation of Fixed Capital], Moscow, 1959, p 19.
4. See Sh.Ya. Turetskiy. "Ocherki planovogo tsenoobrazovaniya" [Essays on Planned Price Formation], Moscow, 1959, p 20.
5. See Ya.B. Kvasha. "Amortizatsiya osnovnykh fondov v promyshlennosti" [Amortization of Fixed Capital in Industry], Moscow, 1959, pp 61-62.
6. See Ya.B. Kvasha. "Osnovnyye fondy i kapitalnyye vlozheniya SSSR i SShA" [Fixed Capital and Capital Investments of the USSR and U.S.A.], Moscow, 1963, pp 135, 209 and others; V.P. Krasovskiy "Problemy ekonomiki kapitalnykh vlozheniy" [Problems of Economics of Capital Investments], Moscow, 1967.
7. A detailed validation of methods for determining alternative evaluations of the work of production cells of the national economy and computed results based upon them are contained in articles by the author, published in IZVESTIYAKH AN SSSR. Economic Series, 1981, No. 6; 1984, No. 3.
8. See "Narodnoye khozyaystvo SSSR in 1961", Moscow, 1962, p 750.
9. See "Narodnoye khozyaystvo SSSR in 1960", Moscow, 1961, p 84.

10. See "Narodnoye khozyaystvo SSSR in 1967", Moscow, 1968, p 861.

11. See "Narodnoye khozyaystvo SSSR in 1980", Moscow, 1981, p 503.

12. Ibid, p 49.

13. Ibid, p 521

14. Doubts were also expressed with regard to the quality of a 1925 revaluation of fixed capital of industry. However, the check carried out by us using specific capital investments convinces us regarding its trustworthiness.

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#### Goskomtsen Official Evaluates Effect of Contract Prices

18200435 Moscow *EKONOMICHESKAYA GAZETA*  
in Russian No 30, Jul 89 p 13

[Article by L. Rozenova, deputy chairman of USSR Goskomtsen: "How Are the Contract Prices 'Working?']

[Text] Improvement of the economic mechanism and acceleration of scientific-technical progress call for using the entire range of economic levers, among which prices take up an important place. Wholesale prices of new technology must on the one hand satisfy the interests of the manufacturer and on the other those of his consumers, realizing the principle of social justice not only for the parties to the contract, but ultimately for society as a whole as well. The combination of these interests can be most fully taken into account when prices are set by agreement and are based on the efficiency of applying the new equipment thanks to improvement of its performance characteristics.

In connection with the democratization of pricing, the rights of production enterprises and associations to establish contract prices have been substantially broadened since the beginning of 1988. But the establishment of prices by agreement between the parties does not mean that these prices can be determined on the principle of "whoever is stronger" or can depend on the dictate of the manufacturer. In accordance with the USSR Law on the State Enterprise (Association), contract prices are established in accordance with uniform rules and uniform technology.

#### What Kind of Prices Are Contract Prices?

We need to note first off that contract prices are set only on new machines, equipment, and instruments on a list defined by USSR Goskomtsen. What is more, they are set for a definite period of time: no more than two years, after which the wholesale prices are included in the price list. The setting of these prices is governed by a uniform methodology.

As of 1 January 1988, a list was approved that contained about 200 designations of groups of machines and equipment on which contract prices are set. As manufacturers and product consumers gain experience in establishing contract prices and in order to democratize pricing further, as of today this list has been expanded to 500 designations of groups of products of machinebuilding. Contract prices are established as a rule on the end product. According to calculations of USSR Goskomsen, they now apply to 70-75 percent of new products of machinebuilding.

A uniform methodology for determining them has been adopted in order to make contract prices sounder. It is used to restrict the maximum level of the price so as to guarantee effective application of the new equipment by the consumer. The fundamental feature that distinguishes the contract price is that the cost method is cast aside in determining it. The level of the price depends on the performance characteristics of the new equipment. Higher costs that do not guarantee an additional benefit from the consumer's application of the new equipment do not result in higher prices. The new principles of pricing presuppose that at least 30 percent of the useful benefit from improvement of the performance characteristics in application of new machines and equipment remains with the consumer. This guarantees that the product is relatively less expensive and gives the consumer an economic incentive to use it. In order to strengthen the consumer's role, when he issues a request for the design of new equipment, he calculates the limit price on the basis of improvement of performance characteristics and product quality. This in fact becomes maximum price when contract prices are agreed on.

Every customer evaluates the performance characteristics embodied in a machine, above all from the standpoint of meeting his own needs. In this connection, the contract prices can be differentiated from one area to another in which new machines, equipment, apparatus, and instruments are used.

Practically all new products of machinebuilding destined for series manufacture go through three stages of production. First, the product is debugged and the scale of its output is expanded up to the output called for in the design. Then the volume of the product's output becomes relatively stable. And finally the volume of the product's output gradually decreases (in a number of cases sharply) until its production ceases altogether. These three stages of production have their own typical and inherent economic patterns.

The distinguishing characteristic of the first stage of production of new technology is on the one hand the relatively high level of costs in the period of debugging and on the other the higher efficiency resulting from its newness. Application of contract prices over that period makes it possible to regulate more flexibly the distribution of the new machines and machinery (the demand for them). This is especially important as

wholesale trade expands and in connection with serving the interests of both product consumers and product manufacturers. In the second stage, prices must drop and fit into the price list as the costs of manufacturing the equipment decrease and also as the efficiency of its use declines. And finally, in the third stage, when the product begins to become outdated and the demand for it drops off, the economic conditions should be brought about for its replacement and by agreement between the parties lower prices should be set as compared to those established centrally.

### The First Results

Opinions differed as the preparations were made for the transition to contract prices on new products being put into production. Some economists predicted an unrestrained rise of prices and a correspondingly sharp increase in profit, above all in machinebuilding enterprises. Others predicted that the new product would be unprofitable because the consumer would monitor the price level more closely and would try to pay less for the equipment he purchased.

Let us look at the results of application of contract prices in the 1st year they have been in effect—1988.

Even though the share of products sold in 1988 by production enterprises and associations in the machinebuilding complex at contract prices increased 1.6-fold, their share in total commodity output was only 5 percent, as against 3.1 percent in 1987 (up until 1988, prices were established by agreement of the parties only on machines and equipment manufactured under one-time and custom orders). The report data show that the share of all products sold in 1988 at contract prices (expert, scientific-technical, and new technology) represented only 7.5 percent of the total volume of marketed output of the machinebuilding complex.

The share of output sold at contract prices proved to be higher than the average in enterprises manufacturing large one-of-a-kind equipment produced unit by unit and was as follows in 1988: 12.3 percent in USSR Minstankoprom (6.4 percent in 1987), 13.2 percent in USSR Minkhimash (5.9 percent in 1987), and 13.7 percent in USSR Mintyazhmash (4.1 percent in 1987).

As production is updated, the share of new equipment sold at contract prices will increase in the total marketed output and according to our calculations will amount to 11-12 percent in 1990.

It should be noted that the level of a new product's profitability differs negligibly from the profitability of a product previously brought up to rated capacity. Report

data have shown that the profitability of all products sold in 1988 at contract prices was 30.2 percent (relative to the production cost), including about 25 percent for new machines and equipment, which is only 2 points higher than the profitability of total marketed output (23 percent). Since contract prices are set as a rule within the limits of the limit prices agreed on with the customer, the conclusion can be drawn that the new machines and equipment must also be cost-effective in operation.

Given the negligible share of contract prices and the low profitability of new technology, which does not differ essentially from the profitability of total commodity output, essentially these prices have not had an appreciable influence on the volume in value terms and profit in machinebuilding. The maximum impact of these prices on the total price level of products of machinebuilding is estimated in the range of 0.3 percent.

Determination of contract prices by a uniform method that envisages the establishment of prices as a function of improvement of the product's performance characteristics and quality limited the contract prices to 70 percent of the useful benefit from their application, and their level did not "shoot up." At the same time, analysis of the level of prices established by agreement between the parties has shown that some are too low, and the new technology is produced at a loss, while some are too high and established without taking into account the efficiency of the new equipment's application.

#### Responsibility of Consumers

In 1988, pricing authorities made spot checks of contract prices of the most important products determining technical progress, of the actual benefit of new products, and of the correspondence of that benefit to the calculated benefit that was assumed in substantiating the contract prices.

Out of all the contract prices of new machines and equipment checked by USSR Goskomsen, 70 percent had been set at an economically sound level, 15 percent were too high through the fault of the manufacturer, 8 percent were too low, and 7 percent were too high through the fault of the consumer.

Many enterprises figuring as consumers proved to be unprepared for the setting of prices by agreement between the parties. This seems to be related to the fact that for a long time customers did not experience restrictions on "free" capital investments and became accustomed to a carefree attitude toward calculations of efficiency and the rate of return on outlays. That is why they have not felt the changes or the need to acquire equipment under the new conditions for the resources they have earned.

We can cite as an example of this situation the new 12-axle VL15 electric locomotive, whose price as negotiated with the customer—the USSR MPS—was 2.1-fold

higher than the price of the 8-axle VL11 electric locomotive, while the increase in power was 1.7-fold. In agreement with the USSR MPS, the manufacturer set a price on the new electric locomotive of 670,000 rubles for 1988. This was 1.2-fold higher than the limit price, which was determined by agreement between the parties so as to take into account improvement of the performance characteristics of the new electric locomotive at the time when the technical assignment was given for its development. Similar cases of agreement on excessively high prices have also occurred for other types of equipment.

The contract price for the "Progress 96" 96-channel digital seismic station manufactured by the Moscow "Geofizpribor" Association was negotiated at 210,000 rubles. This price exceeded the limit price by almost 1.4-fold. The contract price was excessively high because there were important deficiencies in the design of the new equipment through the fault of the Saratov Special Design Office of the former USSR Minneftprom. In putting the station into production, "Geofizpribor" made more than 300 changes in the design documentation, which increased the cost by 58,000 rubles. But the station's developer bore no economic accountability at all for the mistake which caused the limit price to be exceeded.

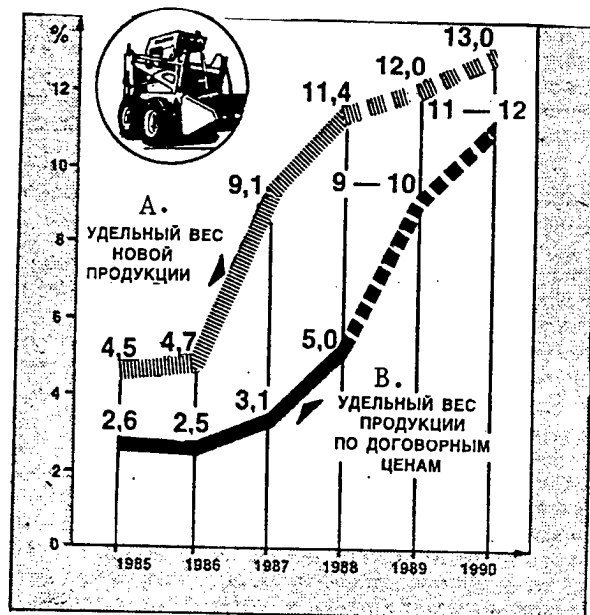
In these and a number of other cases, equipment consumers negotiated prices of new equipment and then made an issue of their unsubstantiated growth. This indicates that consumers have a formalistic view of the new economic conditions, a desire to continue in the previous way of passing on to pricing authorities the deciding of questions which lie within their own competence.

We should note that there have also been cases in which the contract prices were excessively high because the parameters assumed in substantiating them were not confirmed by consumers because of the equipment's low reliability.

For instance, the contract price of a bulldozer (DZ-141KhL) used at low temperatures, which was negotiated between USSR Minstroydormash and the former USSR Mintsvetmet, actually proved to be excessively high because in operation the performance characteristics did not correspond to those envisaged in the normative technical documentation. According to the results of 1-year operation of the bulldozer, the contract price was reduced for the 2d year of its validity because the actual benefit was lower than that that had been calculated.

Manufacturers of products also proved to be unprepared. In spite of a high economic benefit agreed to, excessively low contract prices that resulted in the unprofitability of production were set on transformers of the Moscow PO "Elektrozavod" imeni Kuybyshev, on products of the Kurgan Enterprise for Production of Woodworking Machines, on "Iskra" computers, and certain devices of the Leningrad "Elektronmash" NPO,

Share of New Technology Sold at Contract Prices in the Total Volume of Marketed Output of the Machinebuilding Complex



Key:

A. Share of new products

B. Share of products sold at contract prices

units and conveyors of the Khmel'nik "Strommashina" Plant, mixers of the Gomel "Stromavtomatika" Plant, etc.

### Is There a Need for Monitoring?

When contract prices are set, the customer, that is, the person paying for the product, becomes the principal entity monitoring their level, and no monitoring by the state can or should take his place. Up to now, many customers have not displayed due exactingness toward contract prices, have put up with incomplete delivery of equipment, and have not taken advantage of their rights to send back substandard products.

There is no question that the level of the economic work done by enterprises must increase, and this is also true of their ability to work with contract prices. But it would be an oversimplification to reduce the question just to this. In calling upon the customer to pursue his interest in

being more exacting in negotiating prices, we cannot but take into account that this exactingness has been greatly weakened in the context of the shortage of physical resources. Cases are not uncommon in which the customer puts his signature below a benefit and a contract price that have been set too high. There is usually one explanation: otherwise, you do not get the equipment. It is extremely important, then, to bring the volume of capital investments into line, above all capital investments financed out of enterprises' own resources, and to back them up with physical resources, including machines and equipment. It is also necessary to substantially increase the volume of wholesale trade in machines and equipment.

As for state price controls, along with the uniform methods and organizational policy, they include monitoring the soundness of the setting of prices and the correctness of their application. The economy has an interest in resources that have been earned rather than those received on the basis of an unjustified rise of prices becoming a source of additional profit, whose role will objectively increase under the new economic conditions. In this connection, state monitoring of prices must be strengthened and improved.

In accordance with the USSR Law on the State Enterprise (Association), when profit is realized unjustifiably through a breach of state price discipline, twice the amount is to be paid into the budget out of the collective's cost-accounting income.

We can give such an example. The Pskov Heavy Electric Welding Equipment Plant of USSR Minelektrotekhprom sold the MTM-247 machine in 1988 at the contract price of 104,200 rubles. This price was almost twice the limit price on the same machine that had been negotiated with the customer when the technical assignment was given—55,000 rubles. When it paid 98,400 rubles into the budget by order of pricing authorities, in the end the plant did not even make back its costs in production of the machine.

Pricing authorities invoke economic penalties for all cases discovered of setting excessively high contract prices and also cases of unlawful setting of contract prices instead of list prices on products put into production earlier. This is a rather harsh, but fair measure toward those collectives which take the road of setting high prices instead of conducting their economic activity efficiently.

## REGIONAL DEVELOPMENT

### Self-Financing Increases Profits of BSSR Farms

18240211 Moscow *EKONOMIKA*  
*SEL'SKOKHOZYAYSTVENNYYKH I*  
*PERERABATYVAYUSHCHIKH PREDPRIYATIY*  
*in Russian No 6, Jun 89 pp 9-12*

[Article by V.I. Ilchik, candidate of economic sciences and head of the sector for financing and the extension of credit (BelNIIEP APK), under "Full Cost Accounting and Self-Financing: Experience, Problems" rubric: "Formation of the Profit of Agricultural Enterprises Under Self-Financing"]

[Text] The kolkhozes and sovkhoses of Belorussia went over to full cost accounting and self-financing on 1 January 1988. This brought substantial adjustments to the economic conditions of their work: the procedure for the formation and the structure of financial resources and the system for price-setting were changed and there was a reduction of the amount of budgetary financing, state subsidies and payments from centralized funds.

Under the new conditions of management, there was a dramatic increase in the role of profit as an incentive for production activity and as the basic source of the financing of expanded reproduction. Self-financing presupposes compensation through own means and, in individual cases, bank credits for expenditures having to do with the carrying out of capital investments, the increase in the number of productive livestock, the increase in working capital, the formation of economic incentive funds and other expenditures for the development of production. Under self-financing, kolkhozes and sovkhoses are basically provided with financial resources through the monetary receipts from the sale of output including received profit.

The transfer of agricultural enterprises to full cost accounting occurred within the limits of the volume of financial resources previously allocated for the development of agriculture. The funds freed as a result of the abolition of the budgetary financing of a number of measures are used to establish differentiated markups on purchase prices for agricultural output sold to the state. They include funds for the payment of markups on purchase prices to unprofitable farms and those operating at a loss; the financing of capital investments; the maintenance of children's preschool institutions and other planned measures at sovkhoses; the extraction, transport and application of peat for fertilizer; the financing of the planned expenditures of unprofitable kolkhozes (other than appropriations for the construction of intrafarm roads); compensation of insurance payments; and indemnification of the price differences for mineral fertilizers, farm machinery, motor vehicles and associated trailers. The total calculated sum for the establishment of differentiated markups on purchase prices for agricultural output at republic kolkhozes and sovkhoses was 1.4 billion rubles.

The republic has maintained payments supplementary to purchase prices for heavy young cattle in the amount of 672 and 960 rubles per ton when sold as live weight of 350 to 400 and over 400 kg, respectively.

Of the total sum of differentiated markups on purchase prices, 34.4 percent goes to compensate kolkhozes and sovkhoses for supplementary expenditures having to do with the increase in the production cost of agricultural output in connection with the abolition of budgetary subsidies for mineral fertilizers and farm equipment and the budget financing of the performance of a set of tasks in the utilization of peat for fertilizer. To a considerable degree, the payment of the remaining sum of differentiated markups makes it possible to equalize the economic management conditions of kolkhozes and sovkhoses located in different natural-economic zones on the basis of an economic evaluation of the land.

It should be noted that in the years since the May (1982) CPSU Central Committee Plenum an increase in the production of output and an improvement of its quality were observed every year in the BSSR. In 1987, the volume of the gross production of agricultural output exceeded that of 1982 by 41 percent. The yield of grain crops reached 33.9 quintals per hectare for the first time, 199 quintals of potatoes were harvested per hectare, and the milk yield per cow reached an average of 2,985 kg. Whereas only 361 million rubles in profit were obtained in 1982, the amount was 2.303 billion rubles in 1987. The profitability of production increased from 8 to 33 percent in this period. The production cost of the basic kinds of output declined in 1987 and the entire increase in profit was basically obtained through an improvement of its quality. As a result, most farms had favorable economic conditions for the transition to the new work principles.

The efficiency of production at republic kolkhozes and sovkhoses also rose significantly in 1988. In particular, profit increased by 850 million rubles and amounted to 3.153 billion rubles. The profitability of production increased from 33 to 43.2 percent and all farms finished the year with profit. There was an improvement of clearing and payments discipline, indebtedness under long and short term bank loans declined and defaulted payments were practically eliminated.

Overall the results of the work of agricultural enterprises were worse in 1988 than in the previous year. The volume of the gross output of agriculture in comparable prices was only 92.9 percent of the level of 1987, that of plant growing was 79.9 percent and that of animal husbandry was 102.8 percent.

Because of the unfavorable combination of summer temperatures, the yield of grain crops declined to 25.8 and that of potatoes fell to 137 quintals per hectare. The gross harvest compared with the level of 1987 was 75 and 66 percent, respectively, and the production cost of output increased. The gross harvests and yield of the remaining agricultural crops other than sugar beets were

also lower. Less fodder was also procured. Profit obtained from the sale of the output of plant growing was lower by 232 million rubles and profitability declined from 54.8 to 33.7 percent.

In animal husbandry, the gross milk yield at kolkhozes and sovkhozes increased by 5 percent in 1988, the gross increase in the live weight of cattle was up by 2 percent and that of hogs increased by 8 percent. The average yield of milk per cow increased by 169 kg and there were increases in the average daily increments in the live weight of cattle and hogs and in their surrender weight. The production cost of output in animal husbandry remained at approximately the same level.

The sale of milk to the state increased by 4.7 percent and meat sales were up by 6 percent. At the same time, the sale price of 1 quintal of milk rose to 9 rubles 42 kopecks, or by 22.4 percent, and the profitability of its production was 69.8 percent compared with 37.1 percent in 1987. The total profit obtained from the sale of milk increased by 601 million rubles, or by 95.3 percent. The profit from the sale of cattle increased by 284 million rubles, or 55.3 percent, the profitability of its production rose from 23 to 33.2 percent and the average sale price increased by 10.7 percent. In swine raising, the profit increased by 95 million rubles, or 53.1 percent, the profitability rose from 23.2 to 32.8 percent and the sale price went up by 7.9 percent.

Overall the profit from the sale of output in animal husbandry increased by 1.041 billion rubles, or by 61.1 percent, in 1988 compared with 1987 and its profitability rose from 31.2 to 47.5 percent. The growth in income in animal husbandry made it possible to compensate for its shortfall in plant growing and to obtain an additional 800 million rubles profit.

It should also be noted that prior to the bringing in of the harvest for 1988 all animals were fed in the stall period on the farms with fodder left over from 1987, whereas in the summer the cattle, sheep and horses were kept on the pastures. This fodder was less expensive than that procured in 1988, with which they fed the cattle in the fourth quarter only. This did not have a significant influence on the higher prices for the output of animal husbandry in 1988.

Despite the general increase in the volume of the production of the output of animal husbandry in 1988 in comparison with 1987 and the increase in the selling weight of cattle, the overwhelming share of the supplemental profit in animal husbandry was still obtained as a result of the change in the economic conditions of the work of kolkhozes and sovkhozes. In the republic, 98.8 percent of the total differentiated markups was allocated for the establishment of markups on the output of animal husbandry and only 1.2 percent for the output of plant growing. This was the main reason for the increase in the profitability of production and the volume of profit obtained in animal husbandry.

The differentiated markups on purchase prices for agricultural output have been paid out to kolkhozes and sovkhozes since 1 January 1988 in the amount set by the oblispolkoms taking into account the volume of output actually sold to the state. Last year the farms received these markups based upon their maximum amount that includes the sums of budget financing and full compensation for the losses from the increase in the price of agricultural output. But their influence on the amount of profit obtained by agricultural enterprises is not uniform. Thus, the profit of sovkhozes in 1988 increased relative to the previous year by the amount of the budget financing included in the differentiated markups. Prior to being transferred to the new work conditions, sovkhozes were allocated budget appropriations for capital investments and for the repayment of bank loans for the formation of the main herd and the increase in their own working capital. In accordance with the decisions of the May (1982) CPSU Central Committee Plenum, unprofitable kolkhozes were allocated budget appropriations for the construction of housing and cultural and domestic facilities and for their upkeep. In addition, sovkhozes and unprofitable kolkhozes were allocated budget funds from the state budget for the payment of insurance premiums and the maintenance of children's preschool institutions. In connection with the transfer of the activities of agricultural enterprises to full cost accounting, these kinds of budget financing have been abolished and accordingly profit increased in 1988. It amounted to 157 million rubles in Belorussia. Although the profit and profitability of production increased, overall the financial resources of the farms put into the development of production did not increase, because these expenditures were prefunded through own funds.

On 1 January 1988, the budget financing of a set of tasks in the extraction, transport and application of peat for fertilizer was abolished. For the 1988 harvest, the republic's kolkhozes and sovkhozes applied 12 million tons of peat valued at 45 million rubles hauled in the second half of 1987 and paid through budget funds, which naturally did not effect the production cost of the output of plant growing. These expenditures were fully considered in the differentiated markups introduced 1 January 1988 on the purchase prices for agricultural output sold to the state, which made it possible for the farms to receive supplemental profit.

The decree of the CPSU Central Committee and USSR Council of Ministers "On the Transfer of Enterprises and Organizations of the System of USSR Gosagroprom to Full Cost Accounting and Self-Financing" permitted the agricultural enterprises not to carry out a reassessment of the remaining mineral fertilizers acquired prior to the abolishment of the allocation of budget appropriations for reimbursement of the price differences for them. On 1 January of last year, the value of mineral fertilizers at republic kolkhozes and sovkhozes was 161 million rubles. If they were reappraised, the value of the mineral fertilizers would increase by at least 83 million rubles. The full value of the compensation of mineral

fertilizers is considered in the differentiated markups on purchase prices. For this reason, the utilization of mineral fertilizers previously purchased at lower prices permitted the agricultural enterprises transferred to the new conditions of management to obtain significant profit.

The differentiated markups on purchase prices compensate agricultural enterprises for the higher prices of tractors, motor vehicles and related trailers and farm machinery resulting from the abolishment of the budget financing of the indemnification of the price differences for them for industry and agriculture. In 1988, the value of fixed capital increased by the amount of the supplemental expenditures at kolkhozes and sovkhoses, which led to the accrual of a large amount of depreciation. The latter, however, was accrued only for recently acquired equipment. But since the farms primarily utilized machinery and equipment acquired previously, this led to an increase in profit, which arose in the form of the difference between the sum considered in the differentiated markups to compensate for the difference in the prices for farm machinery and the sum of the supplemental depreciation allowances for new agricultural equipment acquired in 1988 at higher prices. This amounted to approximately 120 million rubles for Belorussia.

In addition to the examined factors, the following also influenced the increase in the profit of agricultural enterprises.

In connection with the transfer of agricultural enterprises to full cost accounting and self-financing, there was a change in the methodology for calculating the production cost of output, from which expenditures not related to its production were excluded. They include expenditures for labor protection and the provision of safety equipment, invention and rationalization, the training of personnel, the payment of scientific research work, allocations for the maintenance of agroindustrial agencies and to the fund of the superior bodies equal to 0.1 percent of the wage fund for the awarding of bonuses to workers and the provision of assistance to them and 0.2 to 0.5 percent for the awarding of bonuses to workers for the introduction of new equipment and progressive technology into production. Beginning 1 July 1988, expenditures for the maintenance of official motor vehicles were also excluded from the production cost of output: all of them are presently covered out of the economic incentive funds formed through deductions from the profit of the enterprise. Annually these expenditures amount to 30,000 to 40,000 rubles per farm and up to 80 million rubles overall for the republic's kolkhozes and sovkhoses.

Beginning 1 January 1988, the level of insurance indemnification for incomplete harvests of farm crops and perennial plantings was increased from 60 to 70 percent for agricultural enterprises transferred to full cost accounting and self-financing without reducing the size of insurance payments. As a result, many of the republic's kolkhozes and sovkhoses that had harvest shortfalls

for grain, potatoes, flax and other farm crops in 1988 in comparison with the average harvest for the last 5 years because of unfavorable weather conditions received additional compensation equal to 10 percent of the value of the harvest. The total supplemental insurance compensation received in 1988 was 40 million rubles, which in the final analysis increased the total profit.

As a result, the largest part of the increase in the profit of the republic's kolkhozes and sovkhoses last year was obtained because of changes in the economic conditions of their work. In this connection, the receipt of such profit and the increase in the profitability of production are not the achievement of specific farms and cannot serve as a justification for the awarding of bonuses to their managers and specialists for the achieved level of profitability of production and its increase in comparison with the level achieved over the preceding 5 years.

One should also consider the fact that the plan for state purchases in 1986 was made the basis for the distribution of the calculated amounts of the differentiated markups for types of output. Because the production and sale of the basic kinds of farm output to the state increased in the republic in 1988 in comparison with 1986, this permitted the farms to receive supplemental monetary receipts and profit. Thus, in 1988, the kolkhozes and sovkhoses received 351 million rubles above the calculated amount in differentiated markups on purchase prices. In comparison with the sum that the republic's unprofitable and losing farms would have received in 1988 through the markups on purchase prices as applied to the conditions of 1987, the supplemental profit of the republic's agricultural enterprises in 1988 through the introduction of differentiated markups and the increase in the sale of output to the state amounted to 210 million rubles.

Thus, of the 850 million rubles total increase in the profit of the republic's kolkhozes and sovkhoses in 1988 in comparison with the previous year, 735 million rubles were achieved as a result of the change in the economic situation. If the differentiated markups on purchase prices had not been put into effect on 1 January 1988 and if the previous economic conditions had been preserved, then the profitability of kolkhoz and sovkhos production in the republic in 1988 would have been practically at the level of 1987.

In 1988, 61 percent of the enterprises and organizations in the country's agroindustrial complex were working under full cost accounting and self-financing. For this reason, an analogous situation was observed at the kolkhozes and sovkhoses not only of the BSSR but also in other union republics. And it will be repeated in the agricultural enterprises of the republics and oblasts that went over to full cost accounting and self-financing in the current year.

It is also necessary to consider that the increase in the profit and profitability of production in connection with the change in the economic conditions of management



has a one-time nature and in subsequent years the effect from the introduction of differentiated markups on purchase prices diminishes dramatically. Agricultural enterprises going over to full cost accounting in 1988 are acquiring mineral fertilizers for the 1989 harvest without having budget subsidies for this, just as the entire set of tasks in the extraction, transport and application of peat for fertilizer at most of the country's farms is paid through own funds and applies to the production cost of output. Every year there will be an increase in the total depreciation allowances in connection with the purchase and inclusion in the balance of farm equipment more expensive than what was previously acquired. The result is an increase in the production cost of the output of plant growing and subsequently of animal husbandry. In short, the effect from the introduction of high differentiated markups on purchase prices for agricultural output sold to the state will gradually disappear.

At the present time, new purchase prices are being worked out for agricultural output that must ensure the compensation of production expenditures and the receipt of profit necessary for the financing of expanded reproduction at kolkhozes and sovkhozes. In determining the level of purchase prices, consideration must be given to the changes that directly influence the production cost of produced output. Thus, because of the abolishment of the budget financing of the set of tasks in the extraction, transport and utilization of peat for fertilizer and of the budget subsidies for the difference in prices for farm machinery and equipment, the production cost of the output from plant production at the republic's kolkhozes and sovkhozes is increasing by 14.9 percent. The production cost of output and the profitability that developed in 1988 do not reflect the changed conditions of production and must be corrected accordingly in determining the level of purchase prices.

The agricultural enterprises have been transferred to the new work conditions without the allocation of additional financial resources and the most important task for them is the further improvement of the efficiency of production. The receipt of supplemental profit is determined by the establishment of an effective anti-expenditure mechanism, which is achieved through the development of all forms of the collective contract and lease relations.

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## MAJOR CROP PROGRESS, WEATHER REPORTS

### Current Grain Harvest Problems Discussed

18240218 Moscow SELSKAYA ZHIZN in Russian  
1 Aug 89 p 1

[Article by Nikolay Osyhkin: "Everything for Grain!"]

[Text] Harvesting has expanded everywhere in the country—from the Baltic region to Primorye and from the

Transcaucasus to the White Sea region. The efforts of workers of the agro-industrial complex are aimed at harvesting in a short time and without losses, increasing the production and procurement of grain and other agricultural products, and noticeably replenishing state food and raw material resources.

As was noted at a meeting between M. S. Gorbachev and managers of a number of oblasts and autonomous republics in the Russian Federation subjected to drought, frankly speaking, a situation, which is not simple, is developing in the country. Whereas in the European part a good harvest was grown and farms joined in the harvesting and sale of grain to the state, in Bashkiria, as well as in Chelyabinsk, Omsk, Kurgan, Novosibirsk, Sverdlovsk, Perm, and some other oblasts and autonomous republics, owing to the blows of the elements, great difficulties arose in the production of agricultural products. The agrarian sector of this zone needs much help. Party and Soviet bodies, primary party organizations, and kolkhoz and sovkhoz managers and specialists are called upon to intensify organizational work on harvesting in all regions so that all the opportunities for improving the supply of food products for the population may be utilized.

The editorial department has received current information on the course of the harvesting campaign. By the beginning of the last 5-day period in July grain and pulse crops (without corn) were mowed on 28.7 million hectares. Threshing was carried out on 24.5 million hectares. Grain harvesting is being completed in the North Caucasus, South Ukraine, and Moldavia. More than one-fourth of the crops were threshed in the Russian Federation and more than one-fifth, in Belorussia, Kazakhstan, Latvia, Lithuania, and Estonia embarked on urgent work.

However, we would like to stress that the particular feature of present harvesting is not in its rates, but in its quality. Having grown a rich harvest in most places, farmers take energetic measures to prevent losses. But, as is well known, speed is a bad helper in this matter. Moreover, heavy rains and winds have twisted the grain mass and laid it on the ground. Engineers, agronomists, and machine operators show maximum creativity and skill in order to cut and thresh every spikelet and not let it fall on the ground. It cannot be otherwise. After all, previously we lost as much grain as we purchased abroad, spending scarce currency on this. Will we also permit such mismanagement now?

Advanced APK collectives declare their emphatic "no." An extremely difficult weather situation has been created in Kuban during the current season. It was not so simple to harvest the lodged wheat and barley. However, in Ust-Labinskiy, Tbilisskiy, and other rayons all machines were reliably sealed hermetically and equipped with grain lifters. Straight and swath harvesting began to be combined depending on specific conditions, not routinely. In the kray a great deal was done for an efficient

use of Don-1500 combines. They have no equal replacement on high-yielding tracts of land. They show an enviable productivity and an excellent threshing quality. Vasilii Belousov, driver of the steppe hero from the Tbilisi Pamyat Lenina Kolkhoz, gives out 1,000 quintals of grain from the hopper daily. There are hundreds of such machine operators. On Don, Niva, Kolos, and Yenisey combines they have placed a barrier against losses and saved a great deal of additional grain for the country. Harvesting in Kuban is approaching its end and state bins are being filled with the 3d millionth ton of grain.

Good news is coming from the Don, the Stavropol area, and farms in the Ukraine and the central chernozem zone. Kernel yields reach about 30 to 50 quintals of wheat per hectare on many farms here. For now they are the highest in the entire country. This gladdens us. Everywhere Soviet peasants have one aspiration—to completely harvest and to reliably preserve everything that has been grown on fields, to give people more food, and with their persistent labor to advance perestroyka. They do not have fewer problems than miners, but rural machine operators do not let go of steering wheels, mow and thresh the harvest from dawn to dusk, and hoist our daily bread to the surface. The only thing that they ask is that their work on the harvest conveyor not be hampered and all the conditions for highly productive labor be created.

But precisely these have not been created. Otherwise, how to explain the fact that during the mass harvesting in the Ukraine a significant part of the combines came to a halt owing to the lack of fuel in tanks? Telegrams poured forth to the State Committee for the Supply of Petroleum Products and other departments. However, fuel did not arrive. Only the prompt intervention of Dmitriy Konstantinovich Motornyy, people's deputy, member of the USSR Supreme Soviet, who is chairman of the Kherson Kolkhoz imeni Kirov, helped to slightly defuse the unattractive situation. But not for long. Fuel and oil now arrive with big interruptions in Vinnitsa, Rovno, Cherkassy, and Ivano-Frankovsk oblasts, where the harvesting campaign is in full swing. Don and Saratov machine operators fuel machines literally on the go (there is no time for sedimentation). Owing to the lack of gasoline, 1,500 motor vehicles were idle for several days in the Stavropol area. And this during the peak season of grain transportation!

The extremely tense situation with the supply of motor vehicle tires and tubes, batteries, and repair materials for kolkhozes and sovkhoses persists. An acute shortage of electrodes, carbide, and drive belts of the running gear of Don-1500 combines is felt everywhere. Is it possible to be indifferent to the fact that in the Russian Federation alone 20,000 KamAZ motor vehicles stand without

rubber and 42,000 grain combines are not provided with batteries? There is a similar situation in the Ukraine, Belorussia, Kazakhstan, and other republics. The serious miscalculations in this matter were discussed at a session of the USSR Supreme Soviet. It is permissible to ask managers of ministries and departments engaged in the production and deliveries of material and technical facilities for rural areas: Until when will they disrupt state assignments and endanger the harvest and food supply for the country's population?

As long as they do not speak up, neither does the government. But the situation with the harvesting, procurement, and preservation of grain and other products is like an emergency. Although slightly more grain has been poured into state resources than by this time last year, there are no grounds for complacency. A vast quantity of wheat, barley, and peas accumulated on threshing floors in Kuban, the Don, the Stavropol region, and Zaporozhye, Dnepropetrovsk, Donetsk, and other oblasts. The shipment of grain is hampered owing to the overloading of elevators and the extremely low rates of its transportation to other regions. The Ministry of Railways allocates very few railroad cars for this purpose. For example, instead of 250, only 20 arrive in Rostov Oblast in a 24-hour period. Meanwhile, it rains and grain in bales begins to spoil. This cannot be tolerated!

Now, as never before, economic methods of stimulating the sale of grain for state resources must operate efficiently. Many kolkhozes and sovkhoses, having fulfilled the state order, in addition, have the opportunity to sell its significant quantity at higher prices. However, in a number of places people do not rush to do this. In some cases farm managers and lessees wait until the exchange mixed feed coefficient is raised. In other cases the arising problem of selling high-quality wheat for currency is being solved slowly. In still other cases the delivery of scarce machines and materials to kolkhozes and sovkhoses for grain sold in excess of the order is not honestly ensured everywhere. These problems can and should be solved immediately. Otherwise, strong, durum, and valuable wheat will be used for livestock feed. Incidentally, cases of mixing high-quality with ordinary grain were uncovered at a number of elevators and no one bore responsibility for this.

Everything for grain, everything for the solution of the food problem! These words now sound like an alarm. During these busy days of the harvesting campaign interest in agriculture should be manifested not in words, but in deeds. If grain is harvested and preserved in full, there will also be meat, milk, and butter and store shelves will be filled with products. Soviet peasants are working untiringly for the sake of this. So, let us support their good impulse!

## POLICY, ORGANIZATION

**Shmelev On Resolving Goods Deficit**

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[Interview with N.P. Shmelev, Doctor of Economic Sciences, professor and department head at the Institute for the USA and Canada of the USSR Academy of Sciences, by A. Stakhov; date and place not specified]

[Text] The speech delivered before the Congress of USSR People's Deputies by N.P. Shmelev, Doctor of Economic Sciences, professor and head of a department at the Institute for the USA and Canada of the USSR Academy of Sciences, did not leave anyone with a sense of indifference. Having rejected recommendations for the distant future, the deputy mentioned a number of specific measures for enlivening today's economy and, if you please, during this very troubled period of perestroika.

[Stakhov] Nikolay Petrovich, frankly speaking it is not an easy task for an individual to interpret those factors which distinguish one economic theory from another that is not dedicated to the subtleties of political economics. Hence, we encounter many doubts in this area.

[Shmelev] There are only two paths to be followed and they can be described as follows: either a controlled market economy or a camp economy. Give it whatever name you wish: administrative-command, bureaucratic or super-centralized—this will not change the essence of the matter; it will function only under coercion. And we must recognize that, given the present level of scientific-technical progress, with intellectual labor serving to guarantee effectiveness, such primitive coercion will solve nothing.

The fact that today we also are unable to trust completely the market elements is another matter entirely. In particular, we have in mind the disorganized financial economy and progressive inflation. For example, can the hold on prices be released? If we take this route, then the hypertrophied economic authority of the producers will be strengthened even more. We are taking a step not towards a balanced market but rather away from it. For example, regardless of the nonsense encountered from the standpoint of market economics, the latest governmental decree concerning the campaign against violations in the area of price formation was inevitable. But at the same time, its effectiveness will also be low because it is impossible to create an economic police force for the entire national economy. Even Goskomtsen [State Price Committee], which is authorized to do this, controls only one third of the prices in effect throughout the national economy. The remaining prices fall within the authority of the enterprises and departments.

[Stakhov] The scale of this authority, according to the opinions expressed by some economists, exceed the scale

for monopolization of the economics of developed countries. They still have not solve this problem, despite the fact that they spent decades attempting to do so. What are we waiting for?

[Shmelev] It is obvious that we also cannot solve this problem in just one hour's time. But a chance does exist for success to be achieved. The chief condition—consistency and the use of diverse means for carrying on the campaign. The first strategic grouping of anti-monopolistic measures—the creation of conditions for overcoming the deficit—the nutritious soil for departmental monopolism. It is obvious that a need exists for accelerating the rates of development for those branches which operate directly in behalf of the consumer. The government has undertaken definite steps in this direction. But I believe that they must be more decisive in nature.

The same holds true for agriculture. The March Plenum of the CPSU Central Committee called for high quality new improvements in agricultural development in the future. How soon will the results become apparent? I do not consider myself to be an optimist in this regard. Indeed, for a period of 60 years we have persistently and purposefully led agriculture down a blind alley. The inertia of this movement will for a long period of time continue to be manifested in the form of envy of leaseholders and hostility towards them by rural and rayon "princelings" and by a dogmatic view with regard to ownership. Such creeping sabotage can be countered only by providing a substantial reduction in taxation for the leaseholders and by furnishing assistance in the form of new equipment, technology, materials and so forth. And a chief consideration must be the constitutional right of a lease for the Soviet government and not for a land owner, even if he is referred to as a kolkhoz chairman or a sovkhoz director.

The second anti-monopolistic bastion—cooperation. It is believed that if cooperation is not suppressed by departmental instructions and if the cooperation specialists are given a "green light" as far as our economy is concerned, this sector within a period of 10 years will be furnishing up to 30-40 percent of the country's gross national income. As yet, the new cooperatives have not attained the goal of even 1 percent.

[Stakhov] But all of these measures are, so to speak, of a strategic nature. Their implementation will obviously not produce immediate results. Meanwhile, departmental monopolism is flourishing: if not upon the departments, who can we rely upon in the campaign against the deficit? It appears that we have an exclusive circle here.

[Shmelev] Truly, there will be no improvement in the economic situation if this circle is not broken up. Measures for a "rapid response" are available and they are known to many. I discussed them during the congress. First of all, it will be necessary to halt the printing press which produces notes for the payment of wages. Is this

money always earned? Not always. It is possible to stand idle an entire day at a machine and not earn one kopeck. In particular, last year the kolkhozes rejected the purchasing of 30,000 tractors. Some of the tractor builders did not receive any earnings. Was the enterprise ruined? No. The printing press was turned on.

This liberal aspect of our economy, even when viewed from a critical standpoint, increased the "hole" in the budget by only 14 percent. The remainder—not less than 90 billion rubles of financial deficit—is the result first of all of the noble campaign against alcoholism, carried out using anti-economic methods, with tens of billions of rubles being removed from circulation using internal resources and with no replacement being made. And secondly, we made tremendous capital investments in the economy using these same resources, the return from which, if it happens at all, will not happen soon. Finally and thirdly—a sharp reduction in the importing of consumer goods.

The reason for our mistakes is the same—we are still striving to uncover "America" in our economy—a certain new path of development that as yet is not known to anyone. The idea of our exclusiveness is extremely vital. And it only aggravates our backwardness. Indeed, the open nature of our economy and its susceptibility to international experience—in addition to other factors, is still a powerful weapon against monopolism, engendered by the low quality of our goods and equipment, slow replacement of the assortment, failure to accept scientific-technical progress, distortions in the economic structure and others.

[Stakhov] You discussed imports. However, up until now many have believed that increased imports represent the path leading to mismanagement and economic stagnation.

[Shmelev] Any attempts to counter imports also issue from the monopolists. Such attempts are concealed behind phrases concerning national pride and independence, while they defend their own mercenary interests. The entire world, including highly developed countries, long ago joined in the international division of labor. And their national consciousness has not been infringed upon.

Imported goods must become the norm on the counters of our stores. Only then will we create an alternative consumer market for the "producer market." This is especially needed during this modern stage—the transitional period for perestroika. Indeed, it is no secret that the emptiness in our stores is perceived by the people to be the fault of perestroika.

Perestroika requires 4-6 years of our overall effort before the new economic mechanism will begin to work and the new structure of ownership takes shape. It is precisely this importing of consumer goods which can provide this breathing space. It must not be reduced as has been done, but rather it should be increased. A man whose hands are capable of carrying out perestroika

must be aware that he can use the rubles he earns for purchasing high quality goods.

[Stakhov] During the sad and well known stagnant years, many billions of additional rubles realized from the raised prices for petroleum were employed largely for increasing imports. Nevertheless, however, there were no increases in our own goods on the market. Is there any guarantee that imports at the present time will stimulate internal production?

[Shmelev] There is no guarantee aside from the fact that we ourselves must carry out the work. But I would note that imports have nothing to do with the problem. It is impossible to conceive a more inefficient use of currency than that which prevailed during the stagnant years. We consumed approximately 200 billion dollars for grain alone.

At the same time, the importing of industrial goods did not exceed 5 percent of the country's overall volume of imports. And now it is also being curtailed. But even from a most elementary point of view, one which has no relationship to science, it is difficult to explain how it is possible to curtail imports which provide the state budget with a profit of 1,000-1,500 percent. And this is with a 100 billion ruble hole in the budget?

[Stakhov] Nevertheless, you will agree that today we lack the currency needed. The study of our foreign trade operations, as cited by N.I. Rychkov, clearly underscores the fact that we have to scrape the barrel in order to be able to pay for our imports. And if they are increased, how will the payments be made? Once again by means of petroleum and timber

[Shmelev] With regard to the question of loans, we must truly apply ourselves in a very cautious and considered manner. But this is not meant to imply that we have no chance of activating our foreign trade operations.

Even a simple substitution of import priorities is capable of raising the effectiveness of foreign trade operations by a factor of ten.

Moreover, we must not hold onto our gold, but rather we must put it in operation. Unfortunately, we cannot increase sharply its sale on the world market, since this will bring about a drop in the price for gold. But we could at least use this precious metal for obtaining credit abroad. Protecting our gold supply is an unnecessary luxury of mismanagement. Why should we do this now? In the event of war? But at such a time—who could use it?

We must begin immediately. Certainly, in the process we must not neglect our obligations to other states. But it is my opinion that this is less frightening than the prospect of perestroika collapsing and, as a result, general dissatisfaction. Today there is not one country that does not have a foreign debt. And what happens? Nobody pays these debts off completely—only percentages of the

credit extended. International economics long ago developed a stereotyped variant for the actions of a debtor—with new creditors being obligated to pay off their debts completely. With the exception of ourselves, nobody is frightened by such a prospect.

[Stakhov] Let us return to the problem of the second bastion—the new cooperation. During the Congress of People's Deputies, there were only a few individuals who had something good to say about the cooperators. In your opinion, what did this represent—a lack of understanding of their role or a conviction that they are obtaining unearned income?

[Shmelev] Quite often such anti-cooperative expressions are associated with elementary envy. For example, the millions of rubles of earnings of the Tekhnika Cooperative, even following explanations by its chairman, remain as a "red flag" for many. Although here one should be more surprised than indignant: enterprising people were persecuted for their actions and they nevertheless miraculously survived. If one is outraged by something else: why does the state, which has billions, fail to take note of them and at times does not even wish to raise the subject? We are grateful to the cooperators for having revealed this: in an absolutely legal manner, they collected items which had long been considered rubbish, sold them in exchange for computers and presented the latter to our state organizations.

Well fine, can we then assume that the high income of cooperators is not appreciated? Impose a tax upon them. Regulate but do not suppress them.

[Stakhov] Different approaches are employed for different cooperatives. Thus the attitude towards production, construction and other commodity producing cooperatives is incomparably better than that towards trade-purchasing cooperatives. The latter quite often are referred to as being speculative in nature.

[Shmelev] This is unfair. We are still living on the basis of stereotypes of the Stalinist economic model, with steel founders and miners still being needed by the country, but by no means middle-men. Actually, throughout the entire chain of reproduction and exchange—from an academician who discovers a new phenomenon, through a worker or engineer who embodies it in product, to a street peddler of goods—all elements are of equal importance. If one element becomes weak, the process breaks down. We see the results of this in our stores. Moreover, the sphere of services is considered to be the sponsor of progress in highly developed countries; it "calls the tune." In our case, failure to evaluate properly the role played by trade, financiers and others is manifested clearly in the fact that this sphere in the national economic structure, in terms of both size and logistical support, occupies one of the last places. Whereas in the decadent West, 73 percent of the inhabitants work in it.

[Stakhov] How can mass attacks against the cooperators be avoided?

[Shmelev] First of all, the people must be convinced by explaining to them the danger posed by failing to evaluate properly the role played by cooperators generally and by middle-men in particular. Secondly, the cooperatives must be protected. To begin with, we would do well not to interfere in their development. And subsequently we must not fail to recognize the fact (for some this might sound unusual or even blasphemous) that this is also a useful agent for the economy. Only the services of middle-men must be legalized. The state and each of its citizens can only gain from this—a portion of the money clearly overpaid to a speculator is returned to us through taxes imposed upon the middle-men. Yes and the prices will fall.

[Stakhov] If the cooperators and the state sector are to compete on an equal basis and not throw "stones" at one another, the former needs raw materials, other materials and equipment and the latter—economic freedom. What caused this imbalance and the dashing of our hopes?

[Shmelev] Once again the deficit. Why is it invincible? This is so because we need a staff in order to justify its existence. This is why it is inhibiting lease type operations, cost accounting and cooperation. For example, the fact that cooperatives open up not alongside state cafeterias but in place of them represents only one absurdity. All of this forces me to think that an exacerbation of the deficit during the years of perestroika is not only the result of sluggish thought and staff incompetence but also at times of its purposeful work aimed at maintaining the deficit (especially in trade) and discrediting perestroika. This is why the one hand holds the economic freedom of enterprises on a short leash, while the other—logistical support for the work of cooperatives.

Both leashes must be released so that with the aid of cooperatives and lease type operations we will be able to create large, small and average size enterprises in our suffering industry (the economies of highly developed countries are supported by these enterprises). This route has been traveled by all of the highly developed countries. We too must follow it.

## FOOD PROCESSING, DISTRIBUTION

### Gosplan Official On Eliminating Sugar Shortage

18270138 Moscow AGITATOR in Russian  
No 13, Jul 89 pp 24-27

[Article by L. Nesterenko; chief of a section of the food industry of a consolidated department of the Agro-Industrial Complex for USSR Gosplan: "Sugar: How To Eliminate the Shortage"]

[Text] It can be stated directly that a paradoxical situation has developed in our country with regard to sugar. If we base our position upon the scientific recommendations for proper nutrition, then we have long been consuming more than has been necessary. An individual who displays concern for his health and who strives to

avoid obesity, diabetes, hypertonia and other diseases which shorten life should consume not more than 80-100 grams of sugar of all types and not more than 38 kilograms during a year's time.

According to the latest data, this is the amount, and at times even less, that is being consumed on the average by the people of Bulgaria, Hungary, Great Britain, France and the FRG. Our sugar consumption is also being exceeded somewhat in the GDR, Poland, Czechoslovakia, Denmark and the Netherlands. As can be seen in the diagram [not shown], our rational level of consumption was exceeded somewhat in 1970 and subsequently to a considerable degree. Our average per capita consumption is more than 30 kilograms of sugar purchased from state and cooperative trade (including public catering) and 13-15 kilograms contained in other products. In this regard, we can and must discuss with some alarm a sugar surplus and how excessive consumption of it is harmful to health.

Meanwhile, the demand for sugar is increasing and for the third year now it has not been satisfied. The supplies of sugar in the trade have declined from 4.5 million tons at the beginning of the five-year plan to 2 million tons in January of this year. The product is now in short supply and practically in all areas, including Moscow at the present time, sales are being limited through the use of coupons.

This is explained by factors which have existed since olden times and also by some which arose recently. There are two constant factors. First of all, a lack of balance in the nutritional structure and a shortage of meat and dairy products, vegetables and fruit in the ration of a considerable portion of the population. This shortage raises the demand for sugar and confectionery products. Secondly, our historically established culture of consumption, one that is lower than that in a number of other countries. Many are simply unaware of the harm caused by excessive sugar consumption and in all probability there are even more who have heard of the insidious properties of this product and yet, figuratively speaking, do not wish to deny themselves of unnecessary pleasures today for the sake of their health tomorrow.

In recent years, other new factors have appeared which have brought about a sharp acceleration in the growth in the demand for sugar. The first of these is the factor of home-brewing. The second, a positive factor in principle—the rapid development of collective horticulture—in 1980, 4.1 million families engaged in it, in 1985—6.3, in 1987—8.3 million and an even greater number at the present time. True, with a high culture of consumption, this would not have affected the dynamics of demand substantially—using sugar for jams and stewed fruit so as not to harm either their own or their children's health, the horticulturists would decrease its consumption in other forms. Unfortunately, however, this did not happen.

A portion of the deficit lay on the conscience of certain cooperation specialists who had started to buy up the sugar for the purpose of producing sugar delights on sticks and other products which tempted children because of their shape. Quite often these products contain dyes and other additives deemed harmful to one's health. But the products are also harmful without them, since they are consumed immediately by children out on the streets, that is, under unsanitary conditions and not as substitutes for the sweets consumed at home and in excess of the amount considered permissible for a child's organism.

Thus the demand for sugar has increased sharply, while last year its production declined. In 1987 we produced the greatest amount of granulated sugar ever produced in the country—13.7 million tons, and in 1988—only 12.1 million, or the same amount as in 1982, when there were 16 million fewer mouths to feed in the country. Moreover, there were considerably fewer horticulturists and self-brewers and generally speaking there were no cooperation specialists whatsoever. Hence—the shortage and coupons.

But why has sugar production declined? Why is it generally unstable? Here we have two reasons. The first has to do with the production of product using domestic raw material, that is, sugar beets. The sugar production volumes obtained from sugar beets have been sharply affected by the reduced harvests and quality of the beets. During the 10th Five-Year Plan it ranged from 8.6 to 6.2 million tons, and during the 11th—from 8 to 5.9 million. The situation has improved during the current five-year plan, but at the same time the output has declined from 8.8 million tons in 1987 to 8.2 million in 1988.

We do not have enough sugar being produced from our own raw material, and thus over an extended period of time we have been importing and processing a tremendous amount of raw sugar cane—annual purchases from Cuba based upon a long-term agreement and quite often also from Brazil and other countries. And our dependency upon imports is even becoming stronger—during the 1960's and early 1970's, the country produced roughly one fifth of all of its sugar from imported raw material, during the 10th Five-Year Plan—32 percent, during the 11th Five-Year Plan—38 and during the current five-year plan—already 35 percent. The amount of imported goods by years, owing to the potential of the exporters or the amount of our currency resources, is also fluctuating considerably and this provides the second reason for the decline in sugar production. Thus, 4.9 million tons were produced from imported raw material in 1987, and in 1988—1 million tons less.

This year the plans call for an increase in the importing of raw material in order to reduce the sugar shortage. In approving this measure, one must see its forced nature and be aware of its cost to the state. For example, more than 3 billion rubles were paid for raw material in 1987, or almost twice as much as the amount paid for imported grain during the same year. The following comparison

will in all probability be impressive: almost one half of the earnings from our vast exports of fuel gas was used for paying for the raw material. The conclusion is clear: the sugar problem must be solved first of all by strengthening our own raw material base and increasing our sugar beet yields.

If we make a judgment based upon the average annual indicators for an extended interval of time, then positive improvements did take place: in 1956-1965—52.4 million tons, in 1966-1975—78.6, in 1976-1985—82.6 and in 1986-1988—85.9 million tons. However, it is easy to see that this growth has been negligible during recent decades. Moreover, it has been unstable—during the 9th Five-Year Plan the harvest was less than during the 8th, during the 11th—less than during the 10th. The harvest of 1976—99.9 million tons—still stands as the record. In 1987, we succeeded in obtaining 90.4 and in 1988—87.9 million tons. Compared to the plan, industry was undersupplied during the last five-year plan by almost 100 million tons of the sweet roots and during 3 years of the current five-year plan—by 20 million.

In order to correct the situation, it is considered to be extremely desirable to halt the reduction in sugar beet acreage that has been continuing for 10 years. If last year it had remained at the level for 1980, then the actual cropping power obtained would have produced 8.5 million more tons. And this would have represented 900,000 additional tons of sugar, or 3.3 kilograms per capita.

Even more importance is attached to improving the cropping power. In 1987, success was achieved in repeating the record level of 1976—266 quintals per hectare. But last year the cropping power declined by 5 quintals. Meanwhile, according to the latest data, the GDR and Poland are obtaining more than 300 quintals, Hungary, Czechoslovakia and Spain—approximately 400, and the U.S.A., France, the FRG and Japan—more than 500 quintals. It can be stated with confidence that, given our soil-climatic conditions, it is fully realistic to raise the average cropping power for beets to 280-290 quintals per hectare over the next few years, that is, to the level achieved in the Ukraine, which furnishes more than one half of the gross harvest.

In 1987, of 11,000 beet growing farms, 3,400 obtained more than 300 quintals of roots per hectare, including 778 farms—more than 400 quintals. But the average level was moved downwards by approximately 1,800 farms which obtained from 151 to 200 quintals and 1,400 farms which obtained even less, including 471 farms with miserly yields of less than 100 quintals per hectare. The large differences in yield, even with the same natural zones, underscore the availability of considerable reserves. For example, in 1987 the average beet yield on farms in Ulyanovsk Oblast was 247 quintals per hectare, in Saratov Oblast—only 142, Krasnodar Kray—284, Checheno-Ingush ASSR—178, Poltava Oblast—275, Kirovograd Oblast—184, Ternopol Oblast—440,

Chernovtsy Oblast—325, Grodno Oblast in Belorussia—345, and in Brest Oblast—247 quintals.

The sugar content of the beets remains low, with the average for the country rarely exceeding 17 percent of the weight of the roots accepted by the plants. Last year it fell to 15.4 percent. If it had remained at the level for the previous year, there would have been 850,000 more tons of sugar.

The cropping power and sugar content of beets are dependent to a considerable degree upon the desire and ability of the farmers to develop correct tactics and to find the optimum variant or golden mean.

The simplest example—the use of mineral fertilizer. Very little of it is being applied and thus low yields are being obtained. At the same time, it is no secret that many farms, for the sake of gross figures, greater earnings or questionable fame, are over-saturating their fields with nitrogen fertilizers. In the process, more beets are being obtained per hectare, but the sugar content of the beets is declining and, in addition, they do not store very well. A measure is needed of the number of plants sown or remaining after the seedlings per hectare of beet field. If there is an excessive number, they tend to suppress one another and the yields will be low. And if the seedlings are thinned out to an excessive degree, the roots will be rich and succulent but once again their overall weight will be less than that possible and their sugar content will decline—all other conditions being equal, the best sugar content will be in roots weighing from 600 to 900 grams.

Or let us take the harvesting schedules. Many farms, rather than accept a risk and at times out of a desire to report more rapidly their "next success," commence their mass harvesting work too early, at a time when the roots are only beginning to increase in weight and sugar content. In addition, the digging work is carried out on a forced basis, with no consideration being given to the availability of motor transport vehicles or the capability of a sugar plant. As a result, the beets, after they have been dug up, are left lying out on the fields or on plant platforms for extended periods of time, where they spoil and lose weight and sugar content. At the same time, many farms resort to still another extreme. They commence their harvest work too late and hence the harvest is dragged out up to the period of autumn rainfall, or even snow and frost. As a result, a portion of the beets perishes.

According to an evaluation by specialists, such mistakes in the harvest tactics, poor operation of the harvest equipment and transport vehicles and faulty organization cause the country to suffer annual losses on the order of approximately 10 million tons of sweet roots, that is, more than 1 million tons of sugar in the final analysis. And indeed the problem is not only economic, agronomic or technical but also moral in nature. It is a moral problem in the sense that a considerable portion of the losses is caused by leaders and specialists who are not



sufficiently competent and who reject the recommendations of science and experienced beet growers.

Failure to coordinate the interests of the sugar plants on the one hand with those of the beet growing farms on the other is having an effect. The latter, even following the introduction in 1982 of mark-ups added on to the purchase prices for beets and price reductions depending upon the sugar content, nevertheless are primarily interested in the gross results and in supplying a plant with roots of any quality so long as the weight is greater. They are motivated to do this by the highly specialized system for planning and economic and moral incentives. Experiments were recently carried out for the purpose of changing the existing abnormal situation and integrating the interests of the beet growers and processing workers in the interest of achieving the final result—the production of a greater quantity of sugar.

The Zhashkovskaya "Sveklosakhar" Agro-industrial System is rather significant in this regard; it brings together, in terms of economic interest, a sugar plant of the same name in Cherkassy Oblast in the Ukraine and more than 20 neighboring farms, the output of which consists of a considerable portion of beets. While retaining their independence, these farms and the plant created, on a voluntary basis, a council which coordinates their joint operations and which approves the norms for distribution of the net income from the sale of the finished sugar. This system has changed the attitude towards the work—last year the cropping power of the beets and their quality, the sugar content and the production of sugar increased noticeably and, as well, the profit of those participating in this work also increased.

Improvements in the operation of sugar plants can and must bring about an increase in the production of sugar. The data for last year indicates convincingly that reserves are available here for this purpose: according to evaluations by plant laboratories, 1 ton of beets accepted by the plants contained an average of 154 kilograms of sugar; in a ton of processed roots (usually following their storage, at times of a prolonged nature), there was less than 146 kilograms of it and only approximately 110 kilograms of sugar were obtained from this ton. In other words, our beets, to put it mildly, are far from being the best in the world and we are extracting from them only 70-71 percent of the sugar available in them (1987 was an exception, with the sugar yield exceeding 74 percent). At the same time, in a number of other countries this indicator is 80-82 percent. If our percentage during the processing of last year's crop had been 75 percent, we would have obtained 585,000 more tons of sugar, an amount sufficient for satisfying completely the requirements of 13 million individuals.

What is preventing us from doing this? First of all, the large losses in beets and sugar content are being caused by poor storage conditions for the roots at the receiving points and plants. The sugar industry's requirements for concrete platforms with active ventilation for the raw materials are being satisfied by only 14 percent. The

tasks of the USSR Food Program with regard to the construction of such platforms and also for the use of biologically active substances in the storage of beets are still being carried out in a poor manner.

And the beets must be stored for long periods of time, since in a number of regions the capabilities of the sugar plants are inadequate. For example, in the Tatar ASSR, in Belgorod, Voronezh, Penza, Ryazan and Tambov oblasts in the RSFSR, in Lithuania and in Belorussia the processing of beets, especially during productive years, continues for 120 to 160 days instead of the optimum period of 100-105 days. The work is dragged out into February and March, at which time less sugar is obtained from the raw material than is obtained during the September to December period.

And the problem is not simply one involving an absolute shortage of plants, but rather it has to do with the fact that the equipment at many of the plants is badly worn out. Moreover, the replacement of this equipment is being carried out very slowly because of insufficient deliveries by the machine builders. This objective circumstance is being aggravated at a number of plants by the absence of proper order, low skills and weak technological and labor discipline. Hence there are frequent breakdowns of equipment, prolonged and low quality repair of equipment and extended equipment idle time—for the branch as a whole, these factors are equivalent to seven plants of average capability becoming inoperable throughout the entire beet processing season.

For the same reasons and also owing to the use of a backward technology at a number of plants, a considerable amount of sugar remains in the waste products of production—molasses. This valuable product, which is used for feeding to livestock and for the production of ethyl alcohol, yeast and citric acid, is still considered to be more important for people in the form of sugar. If its use in the form of molasses were to be reduced by one fourth, we could annually obtain more than one half million additional tons of sugar for the population from the same quantity of beets. This problem has already been solved in a number of countries through the purification and demineralization of the intermediate products of production using ion-exchange resins and other methods. Unfortunately, our science and engineering are still lagging seriously behind in this regard.

We are also lagging behind in the production of high-grade sugar substitutes. In the U.S.A., for example, approximately 5 million tons of cheap glucose-fructose syrup are being produced annually from corn. This syrup is being employed extensively in place of sugar in the production of preserves, confectionery products and non-alcoholic beverages. We are as yet only in the stage of building an enterprise in Kirghizia for the annual production of 60,000 tons of such syrup and only in the future do we plan to increase its production to roughly 2 million tons. The plans also call for mastering the production of a synthetic sugar substitute and for



expanding the production of starch syrup, sorbite and xylite for people for whom sugar is contra-indicated.

During the course of increasing the production of sugar, we must at the same time improve the structure of its consumption. Roughly two thirds of the sugar resources in a number of developed countries are being used for the production of confectionery and also baked goods, preserves, juices, ice cream and other products. In our case, in round numbers, only one third. However, in the process the production of confectionery products is increasing steadily and the per capita increase has ranged from 11.9 kilograms in 1970 to 14.5 in 1980 and 17 kilograms in 1988 (true, the proportion of sugar content in these products has declined during this period from 60 to 55 percent, while an increase has taken place in the proportion of starchy products). We also had an increase, however small, in imports, which in 1987 were seven times greater than our exports. Based upon their average per capita consumption, we occupy third place in the world, yielding only to Great Britain and the FRG. Nevertheless, the rapidly increasing demand for confectionery products is not being satisfied. The trade supplies of such products have declined by almost twofold over a three year period and almost all of the products are in short supply in all areas.

We should soon be able to overcome the sugar shortage for the purpose of increasing the production of these products. However, other problems will still remain—the limited nature of production capabilities, poor

supply of packaging materials, chronic shortage of cocoa beans, nut raw materials and some other components and the weak development throughout the country of the production of pectin, agar-agar, fruit and berry powders and pastes and a number of other types of raw materials. Only by solving these problems will it be possible to ensure adequate supplies of confectionery products in the required assortment and quality.

We have comparatively little sugar available for the production of non-alcoholic beverages. In European socialist countries, the annual per capita amount ranges from 60 to 90 liters and in the USSR—only 20 liters and, strange as it may seem, in a number of southern republics where the quality of the drinking water leaves a great deal to be desired the per capita consumption of such beverages is only 6-7 liters. And indeed it is not that difficult to increase their production; concern need only be displayed for this problem in the various areas.

It appears appropriate to end this article where it began—with mention of the fact that at the present time we are rushing to consume, at risk to our health, more sugar than is required in accordance with the rational and scientifically sound norms. Certainly, a high culture of nutrition cannot be obtained on the basis of orders, but thought must be given to the need for ensuring that the sugar consumption of each individual is maintained at a reasonable level.

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## FUELS

### Railcar Shortages Hurt Coal Production

#### 40,000 Coal Cars Short

18220116a Moscow GUDOK in Russian 4 May 89 p 1

[Letter by A. Bondarenko, K. Ganeyev, G. Mekh, P. Petrushin, Ye. Apukhteyev, V. Klyuchik and N. Tribis, road dispatchers of the Unified Komsomol-Youth Shift; Commentary by B. Sverdlov, GUDOK correspondent: "There in the Coal Mines: Donbass: We Sound the Alarm Again"]

[Text] The Donbass is experiencing a real calamity as the result of the growing debt of empty cars owed by the regulating roads. Since the beginning of the year they have short-supplied 40,000 gondolas, in which almost 3 million tons of fuel could have been dispatched. Numerous delegations of miners are going from office to office at the railroad administration, where they ask for empty cars, where they plead and where, not to belabor the point, they demand. One can understand them. At almost all the mines, the warehouses are overfilled, and some coal has self-combusted.

This situation is naturally creating a state of nerves in the work of the railroad dispatchers. It happens that you chase the "crumb" of an empty car, running the gauntlet to one division, and it is quite unexpectedly directed to turn up under the bunker of the mines of another. There is a skirmish over each gondola. We wish to ask a question of our sectorial staff: why is there no restructuring in regulatory discipline? Especially since things have become considerably worse than before. After all, today there is no objective reason to justify the outrage: winter has passed, and the flood season too....

Everything probably stems from the fact that the economic levers that should be used in regulation are not in force. The methods of agreements and shouts, with which the management of the main administration of transport tries to establish order, yield no results. It turns out that there must be a radical revision of the financial interrelations among the railroads. Penalty sanctions are needed that would discourage some responsible (rather, irresponsible) directors from using another's rolling stock. GUDOK has already appealed about this more than once, but the cart, as they say, is there now. It is obvious that there is no desire to turn off the accustomed path. It is necessary, however—and the sooner the better.

#### Commentary by GUDOK correspondent

Indeed, you cannot envy the authors of the letter. Is it really only them, however? It is not easy for the chiefs of literally all the coal-loading stations in the Donbass. The other day N. Rogov, the deputy chief of the road, barely got out of the Trudovskaya Mine, where he had gone at the request of the allied workers. They recognized him, clustered around him and would not release him until he

promised empty cars. Where can you get them, though? This problem hung like the sword of Damocles over the transport service. Its own, local unloading would be enough, and the empty car from it would possibly cover some other loading front. At the Kirovskaya Mine, not only is the warehouse heaped up, but the approach track as well. This is where I first encountered a coal spoil heap—it is a gloomy sight.

Three thousand gondolas should be given to the Oktyabrskaya Mine in order to carry out the coal that has been raised to the surface. The situation is particularly serious in the Western Donbass, where the loading is mainly bunkerless. Here the miners were not let down into the stall for days.

In the last few years I have on many occasions seen overfilled warehouses with a cloud of smoke above them. At that time, however, the whole situation was not so alarming. Cost accounting and self-financing forced the miners to value their output particularly. You sell enough of it and on time—you receive wages. After all, however, before it is sold—it must be loaded. This is sometimes impossible. It is then that the miner sees in the railroad worker, to put it mildly, an unsound partner.

Right now an experiment in regulatory discipline is in progress in the network. The roads receiving empty cars pay 50 rubles for each one. At first glance, there is nothing wrong with this. There was something to buy. The trouble here, however, is that there are no sellers. This has a lamentable effect on the buyer. For each ton of coal not loaded on time the Donetsk railroad workers have to pay a ruble each, to the miners, and 100 rubles for each loaded car not shipped to the buyer. This is not cheerful arithmetic. If you add to this the numerous annoyances of which the railroad dispatchers write, the question arises: what sort of punishment awaits the director who pays no attention to regulation? His collective does not finish counting at only 50 rubles. It is clear that with this experiment, work as a whole does not improve.

In my opinion, we must once again try to make the transition to contractual principles among the roads, as cost accounting requires. The Donetsk railroad tried in some way to conclude contracts with the adjacent roads, sending a special delegation for negotiations, which came home empty handed. All this is because the neighbors did not want to incur losses for unfulfilled regulations. If at that time the initiative of the Donetsk Railroad had been supported by the ministry, I am sure that the situation in the Donbass would not be so catastrophic today.

#### But Supply Exceeds Demand

18220116b Moscow GUDOK in Russian 4 May 89 p 1

[Article by V. Fedorov: "Ekibastuz: The Hostage of the Plan"]

[Text] An onerous silence falls increasingly often on the Bogatyr, the largest open pit coal mine in the country.

The gigantic rotary excavators are standing still. The miners are sending angry letters everywhere. Of course, in March the daily norm for fuel extraction was fulfilled only twice here. As the TASS correspondent reports, the railroad workers completely disorganized the work of the Ekibastuz deposit: since the beginning of the year they have failed to send 19,000 railroad cars for loading.

This partnership is striking an appreciable blow to the workers' pockets and is rendering housing construction lifeless. Simple arithmetic shows the scale of the damage. Ekibastuz loses 2 rubles and 60 kopecks per unextracted ton of coal. The total undersupply to consumers was almost 1.5 million tons.

The situation is painfully familiar. Not a day passes without alarming telegram-messages to the editor from an economic front of unbounded power. A critical situation has formed in the Donbass. The miners, under almost an ultimatum procedure, proposed that the administration establish order in the export of raw material.

If one looks at the summary of the transport operations in the first quarter, however, it is difficult to hold back one's astonishment. Everything is in order with the railroad workers' fulfillment of the state order. Moreover, four million tons of additional coal were delivered. Does this mean that planning is on the decline again and there are false guide lines?

Here is what is said by those who found themselves last in this story. V. Konovalov, deputy chief of the Division of Transport of Coal and Ore-Metallurgical Raw Material and Ferrous Metals of the Ministry of Railways, did not deny the fault of the railroad workers. He spoke, however, of the situation which lay at the basis of the total shortage in the country and sees it as extraordinary. It appeared that the consumers do not need coal in the volumes planned. Even with this modest, insufficient provision with cars, the power workers are asking not to unload.

The Reftinskaya GRES reduced its order for the second quarter by 200,000 tons, the Krasnogorskaya TETs—by 150,000 and the Verkhnetagilskaya GRES—by 300,000, etc. The total consumption by the end of the year will drop 1,700,000 tons of coal.

On the whole, the Ministry of Power and Electrification is now prepared to announce a refusal of over 10 million tons.

The mild winter and the solid reserves of fuel have done their work. This is a cause for rejoicing. Irreplaceable natural resources will be conserved. What happened is what the creators of cost accounting dream about—the so far unattainable abundance, when it is not the producer who dictates the conditions, but the consumer, finally acquiring the long-awaited right of choice.

We must realize, however, that right now the miners have nothing to do with these discussions. The plan will

burn coal and that means well-being. In the literal sense, the fuel is also rotting at the warehouses of Ekibastuz, which now has almost 2 million tons more than last year. Twice as much of it has piled up in the Kuzbass. The problem was discussed on the government level. A special commission is now looking into what to do now: where to put the coal?

Perhaps, its extraction can simply be reduced? Practical experience has already more than once put to shame and disproved the assertion: the plan is law. Using this motto we have crammed warehouses with goods that no one needs. To all appearances, this time too, the miners, and the railroad workers along with them, have proved to be the hostages of that plan, deaf to vital realities.

### **Railcar Shortages Hamper Tyumen Oil Production**

*18290157c Moscow GUDOK in Russian 16 Apr 89 p 2*

[Article by V. Sudakov, senior editor of INFORM-NEFTI, USSR Ministry of the Petroleum Industry: "You Can't Replace Salt With Tears"]

[Text] Tyumen—Beginning with the end of last year, the oil workers in Western Siberia turned out to be in a very distressing situation: technical salt from the Solikamsk station on the Sverdlovsk Railroad began coming in to the Glavtyumenneftegaz [presumably: Tyumen Petroleum and Gas Main Association] irregularly and not in the full amount. In particular, a precarious situation with respect to the state order has taken shape in the lead production association Nizhnevartovskneftegaz [Nizhnevartovsk Petroleum and Gas Association]. The point is that the salt is the most important component in the solutions used in the process of drilling wells and in their major repair. In short, you cannot extract oil without the salt.

In the first quarter, broken down by months, the Sverdlovsk Railroad was allocated 2,083 railway cars to take 80,000 tons of salt to the Glavtyumenneftegaz oil workers. In January the line did not provide 196 flatcars, and although it reduced the number owed to 24 flatcars, a shortage of 172 flatcars was carried over into March just the same and it is still increasing. Today the oil workers are owed more than 600 tons of the salt they need, which is in such short supply.

At a conference with the deputy chairman of the USSR Gosnab, V. Yakovlev, which was attended by representatives of the Ministry of Railways, the Ministry of the Petroleum Industry, and the Ministry of Mineral Fertilizer Production, it was mentioned that at the end of last year and in the first quarter of this year, the "Silvinit" Production Association has not been making deliveries of technical salt to the oil workers in Western Siberia in a satisfactory manner. The basic reason is the unsatisfactory supply of flatcars for its shipment by the Sverdlovsk Railroad.

This was also mentioned at a selective conference in the Ministry of Railways. Special instructions in this regard were issued by A. Sidenko, deputy minister of railways, to V. Skvortsov, chief of the Sverdlovsk Railroad, and V. Androsyuk, his deputy.

In particular, the management of the railroad was ordered to deliver no less than 58 flatcars and eight enclosed cars every day to the Solikamsk station for the "Silvinit" association. However, the railroad is not carrying out these instructions, and the technical salt is not being delivered satisfactorily for the oil workers in Western Siberia as before.

The Sverdlovsk Railroad is also to blame for the precarious situation that has developed with the shipment of gasoline and diesel fuel from Omsk for the Glavtyumen-neftegaz oil workers.

Demands and tearful requests from the oil workers to understand their situation are coming in to all levels of authority. But you cannot substitute tears for this salt, for example.

## ELECTRIC POWER GENERATION

### 'Mini' Hydroelectric Station Status Report

18220192 Moscow PRAVDA in Russian 13 Aug 89  
Second Edition p 1

[Article by Yu. Knyazev: "'Mini'-GES on the Assembly Line"]

[Text] Portable, convenient, reliable, ecologically clean. Series output of such "mobile" hydroelectric stations has been mastered by the collective of the Cheboksary "Energozapchast" experimental plant.

The station's capacity is 1.5 kw and it weighs less than 100 kg. The equipment can be set up in a very short time. It can operate successfully in small mountain rivers and serve the needs of shepherds or geologists.

A large number of the "mini" GES's have been sent to Cuba, where they highly evaluate the new product from the Volga region. There have also been a number of orders from our country's republics.

The portable GES was awarded a gold medal at an international exhibit in the Polish city of Poznan. The Cheboksary people want to create a whole "family" of such electric power stations. The output of a station with a capacity of 3 kw is planned. Next year the production of "mini" GES's for both the foreign and domestic market should more than double.

**Social, Labor Conditions Give Rise to 'Vagrant' Workers**

18280261 Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA* in Russian No 6, Jun 89 pp 141-147

[Article by V.N. Shiyan, Higher Party School, Khabarovsk: "What Is Your Attitude Toward 'Bums'?"]

[Text] We have been informed in detail about the hard life of the homeless and jobless in the capitalist West. We recall with sympathy the fate of those who were destitute and unfortunate in prerevolutionary Russia. We know far less about our "bums."

Nothing is said in any of the editions of the large Soviet dictionaries and encyclopedias about social groups inclined to vagrancy and "bumming." As representatives of social groups "outside the system" (that is, supposedly not inherent in our system), "bums" are hardly examined at all in the scientific literature. So far, their place has not been determined in the structure of our society. The recommendations for conducting population censuses have recommended that such people be classified...among housewives. Nor is there any confidence that social groups of this kind will be appropriately reflected in the 1989 Census either.

A description of "bums" as a social group should begin, in our view, with the low level of their needs, which is limited to maintaining their own physical existence. The primitive forms of their productive activity (as is well-known, "bums" get by doing seasonal jobs, collecting bottles and scrap, rendering temporary services, and so on). They usually neglect what are called the higher needs (at times demonstratively). And that in turn restricts opportunities for elementary physical existence. It is worth turning attention to the longevity of "bums." You rarely encounter 50-year-olds or older. I had assumed that at that age they go back to a normal way of life. But it turns out that most "bums" do not live beyond that.

At many enterprises, there are shops manned mainly by temporary workers because of the poor working conditions. When they get their first pay, they start drinking, they do not come to work, they are discharged, and then after a time they come back. This "cycle" can be broken by improving the working conditions. But usually this is done at enterprises only after intervention of "outside forces": ispolkoms and the like. And what is the attitude in stores, dining rooms, food depots, and fish combines toward the temporary workers employed at manual work by the day (loading, unloading, and sorting out goods)! They are not considered to be members of the collective, but outsiders. They are not invited to meetings, their opinion is not asked when production problems and social problems are being solved. Nor does the question arise of giving them vouchers to travel for medical treatment or vacations. Even the thought of allowing these people to share in the benefits enjoyed by all the other members of the collective might seem strange. No

one is interested in their housing situation. Within collectives a hostile and neglectful attitude is formed toward "bums" as toward people of a lower estate.

There are quite a number of conditions that make it difficult to find jobs in large cities. Such as the fact that the relationship between the job, registration, and family situation is intricate in them! A man with a family who arrives will not be able to register even in a dormitory—it is not done. The fear is that he will immediately bring his family along. He is forced to either live like a vagrant without housing and consequently without a job or to get a divorce. This is a rather typical case!

In describing the adverse trends in development of social processes in the capital, researchers have remarked: whereas in the fifties and early sixties approximately half of the growth of the population of Moscow occurred through natural growth, in the late seventies and early eighties newcomers accounted for more than 80 percent of the growth. People attracted here to work "under the limit" as a rule had low skills, by no means all of them became attached to the city's enterprises, and this increased the turnover of personnel.<sup>1</sup> By no means all those who have come to the capital "under the limit" have managed to register and get an apartment after 5 years' work. Some of them, it is certain, have been "thrown overboard."

So that many conditions exist for the emergence of "bums." And the decisive condition for degradation of workers, moreover, is not by any means the existence of temporary jobs which carry low prestige, but the attitude toward them in the collective and in society, the fact that these workers drop out of sight of permanent public scrutiny. A kind of group loneliness of outcasts occurs within the collective, within the human community.

Where are those work collectives which, consistent with the classic doctrines concerning socialism, are to provide all individuals the opportunity for comprehensive development of their aptitudes and for attainment of personal freedom? What "happened" to that noble aspiration? This question can be answered if we take the investigation down to the level of ownership and to the particular ways in which it functions in the system of social relations of work collectives. The desire for economy and the inclination to using the residual principle not only toward working and living conditions, but also toward the worker's reproduction, has resulted in attempts to seek some sort of potential on the side for the collective's social development. Given the bureaucratic and departmental approach to management of production, workers with truncated needs (either because they are less exacting toward themselves or they are legally restricted: the special group) have in fact become such a potential. Loopholes in the legal system have been used here, since the rights of the temporary workers are largely restricted or undefined. Often expenditures for social purposes are cut back for such groups of workers, while at the same

time the remainder of the collective (the permanent work force) gains an opportunity to obtain more funds for meeting its needs.

The deformation of relations in collectives is compounded by oversights in the policy of the departments, which also are striving to save on social services. Take those same lumber camps whose inhabitants are living and working in the expectation of moving to a new place. In those temporary ports of call, temporary relations are formed between the inhabitants (lack of concern about the other person's destiny, insolence, coarseness) and the place where they live (underdevelopment, a barbarous attitude toward the means of production, toward housing, toward natural resources). These relations are compounded because of the increased mobility of labor resources in the new forms: because of the large-scale organization of new construction sites and the extensive use of drafts and organized recruitment. No effective mechanism has been created as yet for regulating that mobility. And some of the people who have become part of the migrational flows may also sink down ultimately to the "lower depths" of society.

Of course, one cannot relieve the "bums" of personal responsibility for their own fate. But it is also impossible to relieve work collectives and our social welfare policy as a whole of responsibility, when workers "released" for one reason or another from enterprises are told to find jobs on their own without appropriate retraining. Usually, they have not improved their own status outside the limits of their former collective. The desire of the collectives and even of entire regions to improve the situation with personnel by hiring people "from outside," rather than by stabilizing and improving the quality of the composition of their own workers, has had an equally pernicious influence. This automatically results in reliance on personnel with lower skills and an artificial stepping up of their rate of turnover in jobs that carry no prestige.

#### How To Return Them to Society?

In the early seventies, I had occasion to familiarize myself with the life of one of the "hobohemias" near Magadan. Self-management is well-organized. Its "commandant" notes with pride that order always prevails in the encampment. There is no disobedience. "Knowledgeable people," former civil servants, people with higher education, enjoy particular prestige. The inhabitants live by gathering things that grow wild and by catching fish and crabs with primitive contrivances. The conditions of everyday life are amazing. In the winter, which in Magadan lasts almost 7 months, it is not hot, to put it mildly. The shacks of the "bums," created from materials at hand, things found on the seashore, do not hold the heat even in the summer. Still their owners do not complain, and they are only uneasy that someone might touch them and get in the way of their way of life. Why is it that they have concentrated here rather than in more favorable places?

We will refer to a case by way of explanation. In Lipetsk, a campaign has been under way to attract the unemployed to socially useful work. A system of personal recordkeeping and operational job placement has been set up for those who have "dropped out" of social production. The initial experience is being summarized, and the conclusion is being drawn that the situation has greatly deteriorated: they have managed to reduce the size of unutilized labor resources, the number of breaches of work discipline has been reduced, and so on.<sup>2</sup> But at the same time the familiar desire to embellish reality has been noticeable. The "birds of passage," it turns out, are sent to jobs which in fact made them what they were in the past (those same loading and unloading jobs in stores, including wine shops). In order to reduce the number of such people in the city, they simply send them elsewhere, sometimes issuing them assignments to enterprises that do not exist.<sup>3</sup> Of course, there is no elsewhere to which to send them from the North and the Far East. Migration is already high there, social facilities are scant, and the structure of workers is truncated.

In Khabarovsk Kray, they end up in the reception and distribution center in the capital of the kray. Jobs must be found for them within a month so that they leave there. And then a new twist of formalism. For instance, on 29 September 1987 the reception and distribution center of the Khabarovsk Gorispolkom turned 10 men over to the Innokentyevskiy Timbering and Sawmill Operation of the association "Dallesprom." In half a year, three had quit that enterprise, one was discharged "for cause," and three more "fled." Those issuing the assignments know all the time that no other result could even be anticipated, since all 10 had agreed to travel to that enterprise with the intention of then returning to "bumming." In view of these circumstances, one cannot agree with the conclusion drawn by P.I. Shlemin in his report on the article "Was the 'Bum' an Intellectual?": to the effect that "vagrancy is especially widespread in certain localities of the Far East."<sup>4</sup> After all, the conditions for its occurrence exist in most of the country's cities, and it is only for the reasons referred to above that the vagrants, the "bums," concentrate in certain regions. This is borne out by the statistics: Those who come from the Far East represent no more than 30-40 percent among the Far Eastern "bums." So the problem of the "bum," then, must be framed not as a special problem typical only of certain collectives and regions. This is a nationwide problem that has its roots in social policy, in the way the interests of work collectives are shaped in practice.

Local party and economic entities also make no small contribution to this process. They issue requests for extensive use of what is called the special contingent, justifying them in terms of the shortage of manpower. As a matter of fact, this is a concealed form of that same saving on the living conditions of the workers.

At some construction projects, the share of the special contingent goes as high as 60-70 percent. The low quality

of work, poor work discipline, and low labor productivity, the temporary makeup of the workers—these are typical features of the activity of such subdivisions. This practice is also typical of Komsomol crash construction projects. For example, such construction projects represent a majority in Krasnoyarsk Kray.<sup>5</sup> Party and economic authorities bypass in silence reasonable demands that the delivery of the special contingent be limited to ordinary collectives. Many such workers later join the ranks of the "bums." Nor is it surprising that criminality and "vagrancy" quite often go together, since they beget and reproduce one another.

Back some 15 or 20 years ago, middle-aged people were predominant among the "bums," "insulted and injured," people who had not found their place in production, in their work collective, in their family. They possessed numerous specialties, some of them had high qualifications. Now, more of those who have not gone through the school of the work collective are dropping out to become "bums." This maintenance of the "bum" population by virtue of young people has become a dangerous tendency. And a natural one. Research shows that one of the reasons for this situation is the high concentration of "bums" and of former convicts in certain regions and settlements, and the low level of development of the social sphere in those places. Children and young people in such places often come into contact with the "bums," juvenile delinquency goes hand in hand with organized adult criminality.<sup>6</sup> The principles of behavior and self-organization of the crime world, which in large part are similar to the principles that guide the "bums" in their lives, are carried over into the young people's milieu.

The problem of seeking out methods of returning the "bums" to a normal way of life and of preventing their reproduction remains an acute one. Attempts are being made to solve it by means of counseling (vospitaniye), using administrative and legal measures, the power of the collective, and so on. Constructive results might also come from research on the pathways of migration of the "bums," from providing types of jobs popular among "bums" to manpower that is stable and competent. The economic and social results of replacing organized recruitment, the special contingent, brigades of "quitters," and other temporary workers by help from a patron organization, by detachments of university students, and by the assignment of workers to work detachments to carry out special assignments are well-known. Experience in this effort has also been gained in the Far East in organizing fishing trips, the harvesting of farm products, in construction of the BAM, in erecting long-distance power transmission lines, and other projects.

The social function of hiring and firing and the formation and development of the collective should be monitored more closely. But that requires elevating industrial sociology to the high level it deserves.

For a very long time, the "bums" were treated like some random and not very important phenomenon that was not worth thorough study. Reality has demonstrated the erroneousness of this assessment and the perniciousness of playing down the negative. In Lipetsk, a city of almost half a million, about 20,000 "bums" were registered at the outset of the campaign mentioned above. If this proportion is extended to the country's urban population, we can assume that the number of "bums" is not really so small, that they can be compared to the representatives of many common occupations. It is evident that they are equal in their numbers to the total labor force of the country's rail and water transportation put together and close to the number of scientists. The statistics open to public access do not offer more detailed information at present. But even this is enough for us to draw the conclusion that we need thorough and honest research into the life of the "bums." That research will help us to understand the sources of many negative processes in our society. Without it, the "bums" will not be returned to society.

#### Footnotes

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## ORGANIZATION, PLANNING, MANAGEMENT

### Academician on Improving Machinebuilding Scientific Base

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[Article by Konstantin Frolov, academician, vice president of the USSR Academy of Sciences: "USSR Machinebuilding: Restructuring the Research Facilities"]

[Text] The increased rates of scientific and technical progress are not a goal in themselves but a condition for planned, stage-by-stage priority satisfaction of the objective national economic needs. Hence the most important requirement: the development and implementation of a unified coordinated scientific-technical, social, and structural-investment policy. Machinebuilding and the introduction of electronics are the basis for modernizing the branches, making deep structural changes in the interests of public consumption, and turning the economy in the direction of man.

The USSR Academy of Sciences sees as one of its main tasks the formation of a strategy for the development of the technical sciences and a radical updating of the methodological arsenal for scientific and technical progress in order to provide for a highly systematic approach to solving scientific problems in order to radically raise the technical level and improve the quality of domestic machinebuilding as well as its ability to compete.

The causes of the arrears of certain machinebuilding branches are linked to previous mistakes and miscalculations in the economic policy, miscalculations that are manifested primarily in the lack of balance of capital investments in various branches of the national economy. Thus only about 5 percent of the investments were made in civil machinebuilding, which provides for the production of means of production, including: heavy transport machinebuilding which received one-twenty eighth of the amount of money that was invested in the branches for which it manufactures machines; machinebuilding for agriculture—one-eighteenth; the production of machines and equipment for light and the food industry—twenty third; and chemical and petroleum machinebuilding—one forty seventh.

Moreover, many institutes with a technical profile (more than 100) were removed from the Academy of Sciences, and some of them have been transferred from one department to another, which led to forfeiting the fundamental nature of the research that was being conducted and a loss of creative personnel. The level of integration of science and production and also of the unification of the efforts of academic, branch, and VUZ [higher educational institution] science has remained

extremely low and "incompatible relations" have prevailed between science and production in the introduction and assimilation of the latest scientific achievements.

The drive for increasing the quantitative indicators of the production of machines and equipment, the dominance of gradual modernization of technical equipment based mainly on "catching up" principles and copying of foreign models, and the orientation toward extensive factors of development have contributed to a lack of receptivity to innovations in industry. Monopolistic practice and the lack of competition, departmental separation, and narrow departmental interests of the present day whereby science has not provided a reserve for the future but has solved mainly engineering problems to eliminate "bottlenecks" in production—all these have caused significant harm to machinebuilding.

Today science as a whole is being qualitatively restructured, getting away from its previous closed structures. Instead of financing scientific institutions the Academy of Sciences has changed over to financing concrete programs and projects. Flexible organizational structures, interbranch formations, temporary creative collectives, and information exchange of scientific ideas and technical solutions on an economically accountable [khozraschet] basis are more and more actively orienting developers toward satisfaction of the effective demand and the search for future orders. New organizational forms make it possible to combine more closely the efforts of scientists of the Academy of Sciences and the higher school, designers, and technologists to work in the most important areas. A market for scientific and technical products is gradually being formed, a competitive approach is being developed for the selection of programs, projects, and subjects, and competition among developers is increasing, all of which reduce the dictatorship of individual producer enterprises and industrial monopolies.

The need to sharply increase allocations for fundamental science was emphasized at the 19th All-Union Party Conference. Expenditures on research in the USSR Academy of Sciences and the academies of sciences of the union republics will increase by 34.6 percent in 1989 as compared to 1988. A total of 400 million rubles are being allotted for strengthening the material and technical base.

More than 500 million rubles have been allotted for the development of 14 state scientific and technical programs, including 180 million rubles for the USSR Academy of Sciences. On the whole budget allocations for fundamental science will increase and amount to about 3.4 billion rubles in 1989.

Along with the improvement of organizational structures and the strengthening of the material and technical base for research, work has been started for creating a legal basis for all innovative activity. Draft laws concerning quality and invention activity in the USSR have been



presented for public discussion. A draft of the Law on Information is in the developmental stage.

But in spite of certain positive strides, one must admit that there has been no radical breakthrough in the acceleration of scientific and technical progress. As before, items from domestic machinebuilding cannot compete well on the world market, the proportion of the most important kinds of machinebuilding products that are up to the world level is low, and the monopolistic activity of certain producers has not been completely eliminated.

Under the condition of economic accountability the leaders of enterprises and organizations of the machinebuilding profile that have been given independence can without special trouble become the clients for large innovations based on the latest achievements of fundamental science. Sometimes this is explained by the weakness and lack of preparedness of the technological base, but sometimes the reason is the shortsightedness, the desire to live only for today, and the expectation of large capital investments for the construction of new capacities. Yet it is known that in U.S. industry in the past 10-20 years 62 percent of the growth of labor productivity was linked to scientific and technical innovations, 18 percent to improvement of the quality of labor, and 20 percent to the new capital investments of the firms. It is important to note that here there is a well arranged mechanism for state support for the introduction of innovations which are based on the results of basic research. This activity is necessary since in the area of the development of new technical equipment and technology research activity in many cases is interdisciplinary, capital-intensive, and requires costly equipment, unique, highly complicated instruments, and so forth.

Therefore under the conditions of the new economic mechanism it is especially crucial to improve the program-target approach to the management of research and development. The USSR Academy of Sciences has developed and put into operation 17 large target programs that are financed from the state budget. A most important feature of these programs, one of which is devoted to increasing the reliability of the "machine-man-environment" system, is that the achievement of a large final result is based mainly on conducting special-purpose fundamental research, which creates a basis for the corresponding applied developments and makes them sufficiently systematic and comprehensive. A fundamental aspect is the fact that the head organizations for the most important areas, sections, stages, and assignments of programs are institutes of the USSR Academy of Sciences and academies of sciences of the union republics and regions. To a certain degree this provides for the "primacy of science over production."

The possibility of utilizing the results provided by stable financing of advanced scientific research done by the academic sector of science, including on a contractual basis by branch research and planning-technological

organizations, should increase the economic interest of industrial organizations in work done in keeping with the programs. This will contribute to raising the overall level of research conducted in the country and will be an important element of the mechanism for state support of innovations in the priority areas of scientific and technical progress.

A significant role in the acceleration of scientific and technical progress will be played by such new organizational-economic formations as interbranch state associations, interbranch scientific and technical complexes, and engineering centers. For example, interbranch complexes headed by academic scientific institutions—Termosintez, Nauchnyye pribory, Nadezhnost mashin, Katalizator—are solving the most important national economic problems in the creation of principally new technical equipment, technology, and materials. The realization of the development done by the complexes contributes to the fulfillment of state scientific and technical programs and projects.

Increasing the effectiveness of the activity of interbranch formations involves both the development of independence, socialist enterprisingness, and economic initiative and economic encouragement of enterprises that are producing products in keeping with the latest developments. It seems expedient to release these enterprises from the payment of deductions into the centralized funds of the ministries and from using part of the profit they receive for the development of interbranch formations. Enterprises and associations that are solving extremely important problems of statewide significance and the juncture of the branches should receive real economic and other benefits. In my opinion, only then will there be a real turn in the direction of science. Stable horizontal economic ties will appear; academic institutions will more extensively take advantage of the possibilities of industrial enterprises and branch scientific research institutes for experimental testing of promising developments; and there will be less of a need to create an "academic industry."

The dissemination of scientific and technical innovations is directly related to the availability of cadres of workers and specialists who have mastered the language of modern science and technology, the basis of which should be an effective system of occupational orientation, beginning with the secondary school and the vocational and technical schools, VUZ and post-VUZ training, and increasing qualifications. The outstanding mechanical engineer and mathematician Academician A. Krylov wrote: "Theory without practice is dead or fruitless and practice without theory is impossible or fatal. For theory one needs mainly knowledge and for practice one needs ability in addition." In machinebuilding there is now an especially critical shortage of ability and mastery. One must state, for example, that in order for the exported Soviet tractors K-700 and K-701 tractors to meet the world level it will be necessary to work on them further, which in monetary terms will amount to about 50 percent of the cost of the tractor.

As was noted, reorganizing the structural investment policy is very important for acceleration of scientific and technical progress in machinebuilding. In 1988 the rates of increase in output from the machinebuilding complex exceeded the rates of increase of the overall volume of industrial production by a factor of 1.6. More than 60 percent of the capital investments in machinebuilding in recent years have been used for reconstruction and technical retooling. This has made it possible to accelerate the replacement of industrial production capital: The coefficient of withdrawal in machinebuilding increased from 2.3 percent in 1985 to 3.4 percent in 1987. The rates of assimilation of new kinds of technical equipment were accelerated: In 1988 alone several thousand mechanized flowlines and automated lines were installed, including rotary and rotary-conveyer lines. The number of machines, equipment, instruments, and other machinebuilding items assimilated for the first time increased from an average of 3,100 in 1981-1985 to 3,500 units in 1987, and the number of units of outdated machines and equipment removed from production increased from 2,400 to 3,700.

The positive changes that have taken place recently in international relations and the growing confidence and openness in solving political problems and economic cooperation create prerequisites for changing over some of the enterprises from the defense branches to carry out urgent tasks facing the national economy. Enterprises of defense branches at which orders have been placed for equipment for light and the food industry are being enlisted to an ever greater degree to solve internal problems of technical development. Some of the military equipment is being converted for civilian needs—the national economy is receiving a unique new kind of equipment. In the future the conversion of the military economy will be developed, which will require the creation of a mechanism for economic regulation of relations between defense branches and the machinebuilding and agroindustrial complexes.

The updating of the methodological arsenal for scientific and technical progress should be carried out on the basis of an awareness of the new role of machinebuilding in the modern stage of the scientific and technical revolution based primarily on the fact that the goals of the machinebuilding complex are not to increase gross output and not to increase the volumes of production of individual kinds of machines and equipment (in a number of cases they have surplus capacities but are not equipped with the necessary adapters, instruments, software, set of additional implements, and so forth) but to produce, deliver, and create conditions for the functioning of fully batched *technological systems* that are reliable and safe to operate and realize progressive resource-saving and ecologically pure technologies.

The creation of these qualitatively new technological systems, naturally, causes the technical equipment to be more expensive initially, but subsequently, because production reaches its planned capacities more rapidly, the

equipment is utilized more efficiently, working conditions are radically improved, the comfort of the conditions for the work of the operator and the safety of the work improve, and the ecological situation improves, these expenditures are recouped 100-fold. We know where the drive for immediate advantage for production without concern for the consumer got us in the past—we are having to pay for that now. The aphorism that circulated in business circles—"the bitterness of poor quality is felt much longer than the sweetness of a low price"—turned out to be right.

Therefore the development of a scientific base for machinebuilding requires a balanced approach and reasonable control of a number of the most important interconnected parts of the system, especially in those areas where we already have a good stockpile and we are not striving to achieve individual technological breakthroughs, although they undoubtedly are very important. The prevalence of qualitative indicators of growth over quantitative ones should be based primarily on a *systemic approach* to the selection of optimal structures for machine building productions, on the development of conceptual and optimal planning of machines and the use of integrated means of automation and computer equipment that envision the assurance of quality and reliability in all stages of the life cycles of the machines—from design to operation.

A certain scientific stockpile in this area was created in the Institute of Machine Science of the USSR Academy of Sciences. For example, with the selection of a strategy for automation scientists of the branch of this institute in Saratov suggest envisaging machinebuilding production as a structural complex system that represents a totality of interconnected subsystems and elements whose functioning and development are in the service of a common goal. It is determined by systems that are external to the complex: first, systems that need it—the sphere of consumption, health protection, and so forth; second, systems on which its functioning depends—energy, transportation, communications, and resource-extracting branches; third, man and all that he needs for fruitful labor and also the surrounding environment. Each of these systems imposes a number of restrictions on the functioning and development of the complex which change in time. Because of this the goal of machinebuilding production includes a multitude of interconnected dynamic components that have various priorities. The complexity of the structure of the goal is inevitably passed on to the system which is created "for the goal" and conditions its "external" complexity.

The achievement of the established goal requires for the organization (or reorganization) of the system "machinebuilding production" the creation of efficient combinations and optimal distribution in space of a large quantity of diverse systems, subsystems, elements, and connections. This peculiarity can be included in the "internal" complexity.

The dynamic nature and changeability of the goal of machinebuilding production and the external and internal complexity thus also condition the expediency and necessity of applying a systemic approach to solving the problem of selecting a strategy for automation in machinebuilding and reliance on methods of investigations of operations, mathematical modeling, and the theory of systems, which should become one of the important constituent parts of the scientific base of machinebuilding.

The systemic approach to the problem takes into account the following aspects:

- the solution to the problem of automation not only of the section, shop, and production individually, but of the entire technological complex;
- the incorrectness of the formulation of the task of selecting a strategy for automation without considering the entire innovation cycle because this way we inevitably get away from the interests of the consumer and optimization of production, a result of which is the high cost and, in a number of cases, the low effectiveness of many SAPR's, GAP's, and GPS's introduced in domestic machinebuilding;
- the utilization in the investigation process of the achievements of the entire totality of technical, natural, and social sciences;
- the consideration of the problem of selecting a strategy for optimization in combination with questions of joint optimization of the structures of the controlling and controlled systems and the determination of the need to create new technologies.

It is expedient to look for the solution to the problem of selecting the optimal structures for the controlling and controlled systems with the determination of a rational degree of automation in the optimal structure of integrated machinebuilding production. The integration should be achieved on the basis of the unity of metrological, informational, and mathematical support, and the topological structure of the production can be both territorially determined and concentrated, depending on the solution to the optimization problem according to the criterion (in the form of a system of restrictions and target functions) arising from the model of the goal that has been set. Here, in order to carry out a clear plan of actions, one develops the conceptual nucleus of the system—the most compressed, compact representation of the structure of the synthesized system.

In order to solve this important problem one uses the models and methods of synthesis of multicountour functionally and territorially distributes structures of control systems and one also utilizes the apparatus of nonlinear discrete programming, graph theory, imitation modeling and heuristic methods. In institutes of the USSR Academy of Sciences methods are being developed for automation of the creation of models that are most adequate to real items, the controlling and controlled

production systems are optimized, and ideas are developed for adaptive production systems in the rearranged structure.

A most important condition for the development of a scientific base for machinebuilding is the restructuring of international scientific and technical cooperation.

In recent years cooperation between the USSR and the socialist countries has developed under the conditions of the incipient changeover of the national economies of the CEMA countries to mainly an intensive type of economic growth, a major factor in which is scientific and technical progress. It was in this period that the negative tendencies in the production integration of the CEMA countries were aggravated. In 1981-1985 the average annual growth rates of reciprocal trade were the lowest in the 40-year history of the existence of the CEMA. The share of the CEMA countries in exports of machines and equipment on the world market is still extremely inadequate.

One of the most critical problems in the machinebuilding of all CEMA countries is the technological backwardness of the branch as compared to developed capitalist countries. It is manifested most appreciably in microelectronic and computer equipment, which ultimately has a negative effect on the condition of the machinebuilding complex and the entire national economy.

The Comprehensive Program for Scientific and Technical Progress of the CEMA adopted in 1985 should provide a new impetus for cooperation of the CEMA countries. A number of head organizations from the USSR Academy of Sciences are participating in the implementation of this program. A total of more than 100 scientific institutions of the USSR Academy of Sciences and academies of sciences of the union republics and regions are included as co-executors. An analysis of the 3 years of implementation of the comprehensive program showed that the selection of the main priority areas was correct. But one should say that the comprehensive program has not yet become the main level in the restructuring of the outdated model of integrated cooperation. There is still a large amount of work to do to improve the economic mechanism which stimulates business cooperation and interest in the implementation of the program at various levels of management of the national economies of individual CEMA countries.

The prospects for the development of international scientific and technical cooperation consist in the creation of conditions for closer ties among enterprises and organizations of the CEMA countries and firms of Western Europe in keeping with the basic provisions of the concept of a common European home, and also in the establishment of direct ties and the formation of joint enterprises and scientific collectives with the leading firms, universities, and scientific associations of the United States, Japan, and other countries on the

basis of the new thinking and proceeding from the priority of human values over all else.

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## TECHNOLOGY ACQUISITION, ASSIMILATION, COOPERATION

### Machinebuilding Flaws Plague Economic Relations with West

18230068 Moscow SOTSIALISTICHESKAYA  
INDUSTRIYA in Russian  
25 Jul 89 pp 2-3, 28 Jul 89 p 5

[Article by V. Kovalenko (Stuttgart-Moscow): "A Window on Europe"]

[25 Jul 89, pp 2-3]

[Text]

#### 1. What the West Expects from Us

"One must finally stop thinking that the FRG or another European country is waiting with open arms for our machinebuilding products. The Western market is oversaturated with equipment. Consider that, under these circumstances, our plants will be able to compete with local firms there, at least on a simple level."

This is how A. Kamenev, First Deputy Chairman of the Bureau of the USSR Council of Ministers for Machinebuilding tried to motivate our delegation. The delegation had been sent to the FRG. More precisely, to Stuttgart, capital of Baden-Wurtemberg state, where Soviet Machinebuilding Day should have been held.

A. Kamenev's words began to be confirmed even on the road from the airport: our cars did not blend in the traffic flow, which was moving with the locally ordinary speed of 140-200 kilometers per hour. But the point was made especially sadly when we arrived and were convinced that dozens of foreign firms were awaiting the delegation, ready to ship us practically any equipment we needed. For foreign exchange. In the extreme case, for raw materials.

It is a pity. We are in need of their services, but they need ours but little. The main trouble is that as long as the interest is one-sided, it is senseless to speak seriously about technical progress in our country. One can set tasks and require world-class output, and this class can even be attained in some cases, but in the main our machinebuilding is doomed to lag. Because any, and I want to emphasize any, Western designer has the achievements of the whole world at his disposal; if necessary he puts a British sensor or Japanese microprocessor on his machine and equips it with West German pneumatics....And what can our designer do to compete

with that? A subsistence economy invariably loses in a competition with the international division of labor. It was proved by Marx.

And there is no place to retreat. The train of international economic integration is gathering speed. In three years the last barriers between European countries will be removed, and its speed will grow sharply. There can still be enough time today to jump onto the running-board, and tomorrow....Tomorrow we can be standing on an empty platform.

We must have time. Many understand this today. The question is: how?

We have begun to abolish the monopoly of the Ministry of Foreign Trade and, in essence, to destroy the artificial closing of our national economy, which for decades has been carefully protected and consolidated. Foreign economic life has come to life all at once. The newspapers have featured reports about contracts and joint enterprises. But, speaking honestly, there is still far more bustle than there is real business. Because there is, as before, no constructive answer to the main question—how to pay for it: most of the transactions revolved in one way or another around either our raw materials or foreign exchange earned in the sale of raw material. The West does not show interest in our processing industry, which does not blend in with its requirements. But then that is nothing to be surprised at—it also does not blend in with our demands.

I cited A. Kamenev's self-critical evaluation not without a purpose, it stands to reason. A realistic variant of a way out of the situation that has been created follows from it.

"Interest in our vast market is enormous," he believes. "Very many would like to break into it, to put down roots. It is just necessary to find mutually advantageous models. For the past two years we have worked very closely with Baden-Wurtemberg's industrialists and have become convinced that the variant with joint enterprises, in which the Western firms would get profit through foreign exchange from the sale of output to third countries, would be unlikely to be used widely. In essence, we are proposing to our partners that we establish ourselves as competitors in the form of joint enterprises. The cooperation variant is much more fruitful, wherein our plants will undertake to manufacture for Western firms various parts and components of machines. This way mutual interests can be coordinated better. Well, and the second countercurrent can be the outlet of our know-how to the Western market.

"Actually, in the first negotiations that I got into, the talk went on precisely around this catchword. They were held at the initiative of P. Birmann, CEO of the Briggs and Stratton Company, for whom it was important to secure the support of Deputy Minister of Automotive and Agricultural Machinebuilding Ye. Levichev.

"A year and a half ago the firm, which covers 60 percent of the world market for low-powered gasoline engines,

and Kharkov's small Traktorozapchast plant, established the first contacts. Briggs and Stratton induced changes in our agrarian policy—because of them a sharply growing demand for minitractors, small motorized towing units, and other small mechanized equipment became apparent. The Kharkovites needed foreign currency and decided to earn it by making aluminum parts for the company's motors. A protocol about intentions was signed. The first step was to get one and a half million dollars. For a third of this amount, the firm undertook to deliver its engines, and, for the remainder, to supply equipment for making thin-walled parts, in order to expand production, which lies at the basis of cooperation. The project was viable in principle, but, in order not to delay the business, an initial acceleration had to be imparted to it. In particular, P. Birmann proposed that, during the first stage, aluminum ingots, as well as parts, be shipped to the company.

"In order to satisfy our requirements for engines, we will have to sell you all the aluminum," Ye. Levichev swept aside the idea by the roots. "And then the spare parts: in a few years their cost will exceed the cost of the engines, and we will get into bondage to you forever. No, let us put the matter on a real footing. We shall select a plant and create a joint enterprise, and we shall make a portion of the parts, both for ourselves and for you, a portion bought by the firm, and a portion to be assembled locally."

"This will be unprofitable for you," said P. Birmann. "Our chief interest is large-scale production. In order to sell engines for \$80, we make 40,000 of them per day. You are oriented to a comparatively small scale, and that means you will have losses."

"But then, perhaps, you have something else for sale?" said Ye. Levichev, trying to expand the sphere of the negotiations. "Let us say, the equipment for producing engines that you take from production. We are ready to buy it."

"Right now there is none," said P. Birmann, waving his hands. "Although it can happen—we update our output every two years. But the main thing is, again, this will give you but little. Just which engine do you need? We make 200 modifications of them. You still will never cover all your problems with one type."

After this the conversation went in a circle and was ended with a vague decision about the necessity for forming a group of specialists that would thoroughly work out all the problems.

Why did the negotiations end up with nothing? The reasons are many, but the main thing, in my view, is the fact that the partners spoke in different languages. For Ye. Levichev, the problem of the engines for agricultural minimachinery is one of many which have arisen sharply recently to face the ministry. From this came the discreteness of his thought: the striving to find that variant that in one stroke "will cover" the problem and will switch to the next.

Those engines are, for P. Birmann, his main and only affair. The engineering aspect—that of arranging production—is not a problem for him. The question is how to formulate a stable and expanding market for his product. And here "step by step" tactics lead more rapidly and reliably to the final goal, in his opinion, than a one-step tactic, let alone a large-scale solution. Starting with Kharkov Oblast, he counts on ousting competitors in several years and expanding the sphere of his influence. And the partner, meanwhile, will develop production to the point where the company will begin to transfer the manufacture of parts in increasingly large amounts, providing thus a foreign-exchange partnership of collaboration. P. Birmann's formula is lengthy ties that are based on the self-development mechanism.

I later managed to be present at several negotiations, and this formula, in one form or another, mandatorily arose in the position of the Western partners.

For example, V. Shtoll, president of the Festo company, emphasized that "it is not necessary to hurry. Ordinarily we spend 7-10 years investing resources in forming market, without counting especially on a profit. And this tactic has not failed us even once—the company's enterprises are operating successfully in more than 30 countries, including socialist countries."

By way of illustration, V. Shtoll demonstrated the first pneumatic cylinder that was manufactured in Simferopol at the joint enterprise that Festo formed with the NPO [Science and Production Association] Pnevmatika. I want to call attention to this: even here the subject of collaboration was machine items.

This is consistent. Within the FRG's machinebuilding production structure, up to 70 percent goes to purchased materials and outfitting items, which are sent by both West German and foreign firms. The share of deliveries across the border has grown appreciably recently. Behind this is the overall trend which all highly developed countries follow: having laid stress on science-intensive production, they try to avoid work that is less demanding scientifically. Whole branches have vanished from their industrial structure—such as textiles, for example. Firms with centuries-old traditions are changing their profiles radically. The Mann-Burmeister and Wein Diesel AO, which is known worldwide for the manufacture of ship diesel engines, let us say, has completely sold out licenses for the output of its products in order to concentrate all its potential on a commodity that requires just mental work—the design of new machinery and technologies.

It stands to reason that it is very annoying to confess that, within the framework of this overall trend, we have proved to be a country to which manufactured goods that formerly were sent to other inadequately developed countries are being sent. But this is reality. This is our payment for the period of stagnation, for the policy of self-isolation. And can it be less annoying finally to confess that in this area we lagged by 15-20 years, and in

another area even more? But the main thing is to note the lag each year and to see no essential changes at all.

Yes, we think that radical economic reform will at last rescue our national economy from a pathological immunity to scientific and technical progress, and changes will appear. But this alone still will not be adequate. One cannot successfully advance technical progress in one country taken separately. The world long ago took up the path of mutual enrichment....It wanted, by habit, to write with "ideas" and it realized that this is precisely the word that confuses us.

That's just the point: today ideas flow from country to country, not so much in pure form as in the form of commodities, machinery and technologies. As a result, they immediately become the property of the broadest masses and not a narrow circle of scientists. It is precisely because of this scale that the main effect of scientific and technical achievements is attained.

We are not ready today to flow into these streams. Mainly, of course, because we are below par and behind in quality. But that is not all. Most of our general machinebuilding products—hydraulics, pneumatics, instruments, and electronic and electrical-equipment devices—are not compatible with their foreign counterparts. They do not coincide in connection sizes, technical parameters, operating conditions and safety. In the final analysis, the machines themselves prove to be mismatched. And, as a result, we cannot draw from their stream, nor they from ours. It is possible to break through to Western achievements, in essence, only by one method—buying whole lines and plants. And this is much more expensive than it could be, and what is more you do not buy everything that is needed.

Cooperation under such conditions is simply impossible. The joint enterprise that was created at the Odessa Heavy Cranebuilding Association and the Liebkherr company for producing heavy-duty truck cranes had to purchase 100 percent of the outfitting articles abroad. What kind of cooperation is this? It is an ordinary sale and purchase. Right now the partners are beginning to play havoc with our manufacture of such articles in the country. They proceed, naturally, from the requirement of their enterprise. And that means, again, handicraft-type work, primitive work.

And if we are not stubborn in our pride and do not completely consciously override the trend of turning over to us the production of parts and components? Interest on the part of the Western companies here is objective and long-term. We, so it seems to me, also will not be the loser. In the first place, we will get a real channel that connects up with systems that are not now joined—the international and our internal systems. Plants will begin finally and earnestly to earn foreign exchange, and the designers will be enabled to use standard modern components, without which they will not be able to do anything worthwhile.

It makes sense, I think, to look down, not from above, but realistically and on the level of that production that is proposed for transfer to us. It is not high enough for some, but the overwhelming majority of our plants still are striving and striving for it. One way or another we must travel this path of gaining skills. So why not make use of the interested support of foreign partners? Why not, in passing, learn many other things from them? Those same Kharkovites, if the deal with Briggs and Stratton works out, will be compelled to work under the dictates of the company, in particular, to update output every two years. And this ability is oh! so necessary for us!

There are minuses? Undoubtedly, and the greatest is probably the ever-present threat of remaining an appendage to more developed countries. But here, as they say, everything depends upon us ourselves, on how far ahead our minds can see and the strength of the desire not to be reconciled with such a role. Even Japan did not become a computer power all at once, it began with umbrellas. We have a preferred situation. But more about this in the next letter.

[28 Jul 89, p 5]

[Text]

## 2. What We Expect from the West

At the Stuttgart Palace of Economics, preparations had been completed for the ceremonial opening of Soviet Machinebuilders Day, and talks have been going on already at the Lebedev booth. They were waiting and ready for its arrival. I. Wolfe, commercial director of the Kherion [transliterated] concern, obtained an instruction from the administration to purchase a license for Lebedev power units and he was ready not to be very stinting. The partner, however, turned out to be obstinate.

"They do not stand on ceremony at all with our brother, they buy up brains, up to the root. Well, but I balked," Yu. Lebedev then chuckled. "Although this was not suitable for me: with the license I have 3 percent, but, with the sale of finished products—nothing. But the sale of licenses does not fit into my policy for the Western market. I need a network of joint marketing and engineering enterprises. There are already such agreements with the Finns, the Japanese and the Greeks. There is a joint enterprises with the Italians. Kherion will blend well in this structure; the sales volume is a few billion marks, and the marketing network is excellent."

Lebedev drove from the exposition to the company. Then the negotiations were resumed at the Palace of Economics, and by the end of them the Western partners were compelled to agree with his conclusions. Only the fact that the concern's administration had given I. Wolfe entirely different powers held back a signing of the agreement.

"But I asked that they not delay the final version and give me a telex within a week, prior to my departure for Japan," Yu. Lebedev assured me.

This is enough, I think, to intrigue the reader, so it is time to introduce the prospering Soviet business man.

Yuriy Alfredovich Lebedev was born in 1953 in the town of Yasino in Tomsk Oblast. In 1978, after completing the Moscow Geological Exploration Institute and his candidature, he began to teach geology at the Gorno-Altay Pedagogical Institute. Simultaneously, on the basis of social initiatives, he supervised the students' design bureau. In February 1989 he was in charge of Gorno-Altay's Silen engineering center (120 people). He has a wife and three daughters. He received his first patent in 1976. In 1978, for the first time, he settled his debts with the Goskomizobreteniye [State Committee for Inventions and Discoveries] Prize. He obtained his first honorarium in foreign exchange—\$1,200—in 1988. Lebedev's power units have been patented in 27 countries.

He is an ordinary inventor, on the whole. Except that he is self-assured to the extreme, to the point of having gall. It is not worthwhile, however, to impart special significance to this. I think that Lebedev still would not recover at all from a success that has collapsed, he fears that others will not believe in him, and so he swaggers, he goes too far. What is much more interesting, in my view, is his domestic position. Unlike his fellow inventors, who by the thousands besiege the ministries and agencies, each one foisting each and every one of his innovations on them, Lebedev considers that he himself is interested above and most of all in his talent. And so he prefers to put the matter this way, so that he is not in need but is needed.

He has placed his power units at defense enterprises—made use of conversions and enticed directors with foreign exchange. As a result, today he proudly announces that he is ready to send them in any amount to any country in the world. But what struck me even more is the refinement with which he compelled plants to implement the economizing policy.

"The formula is simple, like an orange," Yu. Lebedev explained to me with a certain amount of condescension. "We propose that I get \$300 for each power unit. I let loose what I am supposed to give up, into the state budget, part of it I transfer to our funds, in order to pay the plant \$300 for the manufacturing. Well, and we divide up the remaining amount half and half—the profit. This means that if the plant will sell me blades for 200 rubles each, then the foreign exchange it gets will be greater, and it needs this much more than rubles."

He deals just as simply and self-assuredly with foreign firms. Why did Kherion agree to his terms? His main argument: some types of units do not yield anything. A client may have hundreds of different variants, but each needs its own special design. The Silen engineering center can quickly realize these demands with high-quality specially created units. Thus, is it worthwhile for

the Kherion firm to spend money and time on these efforts? Let it engage in that in which it is strong—the manufacture of hydraulic systems, and marketing and service.

"It is profitable both for them and for me, and the authorities do not lose," Yu. Lebedev resumes, contentedly. "It is the maximum that one can get for a license, 20 percent of the sale price of the item. And so we shall take 80 percent and pump four times as much foreign exchange into the country. Is there a reason?"

"There is, of course there is. As they say, I felt it in my bones—why in the West they idolize an increase in skills and do not wish for the sake of this to invest funds in the person. Simple arithmetic: tens of Lebedevs will bring the country just as much foreign exchange as the VAZ [Volga Motor-Vehicle Plant] gives it.

"There is no need, I think, to agitate for this second channel of communications with the world economy—at the level of high technologies. It is important that it is already in existence. At the Stuttgart exposition, passions were boiling not just at the Lebedev booth. Visitors did not conceal their interest in the laser equipment that the NPO Polyus presented. The Triumph company bought metal mirrors—one of the most precise elements of industrial lasers, which requires the highest production sophistication—from Kazan's NPO Soyuz for almost its whole annual program. In precisely the same way, the Moog company joined in, having decided to equip their output with our new magnetic systems. Businesslike proposals were made for coordinate tables with linear electric motors, technological installations for electron accelerators, and other modern developments.

"Here is what I would like to emphasize specially, however: even here at the high-technologies level, there was no competition. In any case, not in the form that we are accustomed to imagine. The negotiations went on most successfully of all in those cases when our know-how was blended with the systems of machines that they developed, that exist in the West."

It is not worthwhile to get carried away by reason of scale alone. This is still not a flood but a thin stream, which makes its way in the world with difficulty. And it will not quickly become the powerful river that we would like it to be. Today's reality is the fact that Western countries will first make use of the results of the technical breakthrough that Lebedev has created and then later we shall. And not entirely because the inventor, in the pursuit of foreign exchange, prefers to do business with capitalist countries, disdaining domestic requirements. It is simply that we must, in order to hitch up Lebedev's units to a press, somehow get modern means of automation, high-head flanges and shutoff fixtures—in brief, again, to get at the ore. The usual story.

When the VAZ was built, in each branch a liaison was designated from among the deputy ministers; he kept his mix of materials and outfitting items for the Zhigulis and



rendered an account to A. Kosygin almost daily. The industry then reared up, but two or three years passed and again it sat down. It is clear, it would seem: trade has exhausted itself as the main mechanism of international scientific and technical exchange. Conclusions must be drawn, and a search for qualitatively different, more sophisticated variants of integration must be sought. This has not been done, and they have not been found.

Right now everyone has decided to blame petrodollars and the shortsightedness of the country's former leadership. I do not think, however, that the negative consequences of the directives on raw materials export that every schoolchild understands today was unknown by those who in their time counted on the "pipe." In order to understand, we needed glasnost, which opened up access to information. They had all the necessary data, but nevertheless the choice was made in favor of the petrodollars. Why?

The conversion from international trade to international integration will require openness of the economy. This exposed right away the ineffectiveness of our running of the economy. I shall not refer to the final, integral indicators—the specific energy intensiveness and resources intensiveness of the national output. I shall cite examples that are of smaller magnitude but, on the other hand, seem to me to be more vivid.

We often refer to the skill of Western companies in keeping pace with technical progress and we do not associate it with, for example, this fact: 90 percent of the FRG's machinebuilding output is delivered by enterprises with less than 1,000 people. And these are not at all feudal appendages of large monopolies, as we are accustomed to view them. The Mapal company (420 people) specializes, for example, in complicated highly precise reamers and it covers 90 percent of world automotive requirements for them. Its 17 designers cope successfully with orders from the most diverse countries. By our criteria, no one will call this a plant, for the group is not large. In our industry, giants predominate. Having monopolized the market, they assert through this mechanism a right to their clumsiness.

Or this feature. Several foreign companies gave me the very same ratio: 40 percent of their efforts were spent on production, 60 percent on outside ties. In our case, from the foreman to the ministry—everyone is engaged just in production. What stands behind this ratio? In my view, just one thing—differing levels of effectiveness of the control mechanisms.

Nor is the situation any better either in organizing mental work. Yes, we have at our disposal good potential in our scientists and inventors. And only a potential. But for integrating processes, ideas still are not the commodity—they must be clothed with operating technologies and finished products. And if we actually want to form a scientific and technical countercurrent to the West, we must first of all create a structure that is favorable for developing brainwork.

Today it simply does not exist. Most of our institutes are more like graveyards, not hothouses for talent. And Yu. Lebedev's success could not exist at all if he had not by fortunate chance come under the eyes of I. Silayev and A. Kamenev. They personally were concerned with his fate, and they devised this abracadabra—the Silen engineering center under the Institute for Machinebuilding Problems—especially for him. "Under" in this case was needed only because neither A. Kamenev nor even I. Silayev had a round press, which must be supplied on the official schedule.

Conversion to international integration requires a radical change in the national economy. A structural restructuring and organizational and legal restructuring are necessary. I am not talking about the economic basis of the managerial activity. There was not enough decisiveness for such a radical breakup at the time. That is why they jumped at the petrodollars. But the task has not disappeared, it has just been postponed and made more complicated.

A window on Europe, just like in Peter's time, remains to be hacked out not so much outwards as within the country. It is precisely in this context, in my view, that, first of all, the processes that are now developing in foreign economic activity should be examined. And that same transfer of the production of elements of modern technology must be approached not in utilitarian fashion, nor as a final goal, but as one of the practical mechanisms for restructuring our machinebuilding and its inclusion in worldwide trends of development.

We have been convinced finally of the idea that we also need market relationships. This is not the first year we have been speaking about it, but we have not had any and never did. Not least of all, I think, because we clearly cannot imagine what these market forces are—in taste and in color. We have been oriented to Marx's "Capital"; the principle and system are there but living concrete practice is needed. The Festo company operates in more than 30 countries, and everywhere it thrives: how does it manage to do so? How are information flows organized? How are mutual relationships with partners constructed? How are external signals brought to specific doers? Innumerable questions can be put. We will get the answers, refined by decades of experience in best organization of the job only when we have entered into direct linkage with the company.

The strategy of international integration is the compatibility of the economies, their synchronous, mutually supplementing development. The truth, of course, is not particularly new, but it can be learned and it can last, survive. The Bureau for Machinebuilding preferred the second version, both because today not only has it no assurance that another path exists, but also because it is a completely viable tactic. It was worked out together with industries of Baden-Wurttemberg state, but it can also be used now for other states and other countries.



This does not mean, naturally, that the whole palette of foreign-economic relationships should be reduced to two channels. There is nothing more blind than to try to cram life into a scheme, not even the most correct one. During Machinebuilders' Day various contacts and ties were established. Wide distribution was given, for example, to one of the offshoots of ordinary trade, which in the West is called "second hand"—the purchase of used equipment, particularly for producing consumer goods that are now being removed from production in the FRG.

But the main attention undoubtedly was concentrated on the pivotal, the main directions along which collaboration will be developed. And for the conclusion of these remarks, I have saved the story about a plan which stands out remarkably against the background of the 25-odd other transactions and agreements reached during the delegation's stay of a week at Stuttgart.

It took place during the meeting of A. Kamenev and L. Shlat, Prime Minister of Baden-Wurttemberg state. The essence of it was to create in Moscow a small island of modern industry. It would consist of a business center with the last word in equipment—from telefaxes and copying equipment to computers linked to the European

information network. Its production base would consist of some small (less than 1,000 people) enterprises. With plants that decidedly are not showpieces; they will even be the most neglected. With the thought of working out a methodology for bringing them up to world class. They will produce basic elements of modern machinebuilding—hydrotronics (hydraulics with built-in microprocessors), pneumotronics, precision machinery, electrical equipment and electronics.

The German side will take upon itself not only a good share of the financing of the project but it will also provide the patronage of leading companies. The main task of the project: to become a practical testing ground for developing a whole complex of tasks in collaboration—from technical and organizational to legal and financial. In Moscow, I was now interested: how are preparations going? The enterprises practically have been selected. In August the parties will exchange concepts, in September the final version should be worked out, and it is proposed to form a consortium and to register it officially by the end of the year.

Well, all right, as they say, and the best of luck.

## MOTOR VEHICLES, HIGHWAYS

### Military Units Build Roads in RSFSR

18010654 Moscow KRASNAYA ZVEZDA in Russian  
1 May 89 First Edition p 1

[Article by Col N. Grigoryev under the rubric "With the Same Concerns as the People": "And the Villages Will Come to Life"]

[Text] When I was in the road construction subunits I noticed the interest with which local residents followed the work of the soldiers. Roads are truly needed, the same as air, there in the Nonchernozem Zone of the RSFSR.

This year the soldiers will build more than 500 kilometers of roads. It is not an easy task, considering the fact that most of the subunits are still poorly equipped. Things are moving along, however. The military road construction workers commanded by Lt Col A. Chernyy, Col A. Lavrov, Lt Col V. Glaznov, Maj Yu. Kashkin and Capt A. Kirichenko meet their targets despite the difficulties.

Time passes and the asphalt ribbons of roads will stretch between the settlements and cities of the Russian Nonchernozem Zone, and the depopulated villages will come to life.

### Conversion: Vans from Bryansk Auto Factory

18010867

[Editorial Report] Moscow IZVESTIYA published in Russian on 14 July 1989 a page one article in the first edition entitled "English Model Soviet Motor Vehicles." The article states that the production association of the Bryansk Motor Vehicle Factory has concluded a contract with the British Firm IAD for the development of an urban, one and one half ton delivery van.

The factory must within two years produce 40,000 freight vehicles for small deliveries as part of the process of converting from military to civilian production. As a transitional product the Bryansk plant will "assimilate" 12 modifications with diesel and gas engines of their own KiAZ-3727.

## RAIL SYSTEMS

### First-Quarter Rail Accident Statistics Analyzed

18290157a Moscow GUDOK in Russian 14 Apr 89 p 2

[Report by the Analysis Department of the Traffic Safety Main Administration, USSR Ministry of Railways: "The Inspectors' View: A Review of the Status of Train Traffic Safety in the First Quarter"]

[Text] In offering readers this review prepared by staff members of the MPS [Ministry of Railways] Traffic

Safety Main Administration, the editorial staff would like the advice of railroad workers. Is such material of interest to them, and does the form of presentation suit them, or is it better if such reviews of the main administration's data are prepared by journalists? In general, do we need to publish detailed statistics on the status of traffic safety? In a word, the editorial staff would very much like readers to express their opinion.

The number of train wrecks declined by 34 percent and the number of accidents by 9 percent in the first quarter of this year, compared with the same period in 1988. At the same time, as noted in a recent directive from the minister, the traffic safety situation in the railroad system continues to be critical. Since the beginning of the year, there has been a wreck or an accident every 3 days and there have been over 100 cases of poor workmanship which have affected the operation of the railroad system by the irreplaceable losses.

Train wrecks involving passenger trains took place on the Southwestern and Volga Railroads. There were no fatalities, but two passengers were wounded.

Provisions for safety are poor on the October, Baltic, Moscow, Northern, Transcaucasian, Southeastern, Kuybyshev, Central Asian, South Urals, and Kemerovo Railroads.

The worst situation has taken shape in line maintenance, and more than half of all wrecks in the last quarter were the fault of these workers. The main reason is the flagrant deviations from the normative requirements for line maintenance (sagging, misalignment, and angles in the layout and malfunctioning of switch transfers).

Nearly one-third of all wrecks in line maintenance have occurred as the result of a break in the rails. In the majority of cases, this takes place on those sections where the track is in unsatisfactory condition, particularly on the October, Baltic, Moscow, Southwestern, Southeastern, and Kuybyshev Railroads. A freight train was involved in a wreck on the South Urals Railroad (the Magnitogorsk Subdivision of the line) because there was no barrier at a location where work was under way.

Safety has deteriorated significantly in transport activity. There was a wreck on the Transcaucasian Railroad and an accident on the Odessa Railroad because switching consists went out on an open line with their automatic brakes disengaged. A group of railroad cars that had broken loose led to the wreck of a freight train at the Anzherskaya station in the Tayga Division of the Kemerovo Railroad. There were more cars that got away on the Kemerovo Railroad last year than on the other railroads, and the situation was worst of all in the Tayga Division.

Cars that were not secured and got away spontaneously led to an accident at the Luga station on the October Railroad. The one at fault for what took place, the man making up the trains, was killed.

Violation of the rules for switching work by the Volgograd-2 assistant station master ended with the collision between a switching consist and the last car in a passenger train. The switchover of the centralized switch under a train at the Pudost station on the October Railroad and the departure of a train where a brake shoe was not removed at the Kaluga-2 station on the Moscow Railroad led to the derailment of cars in passenger consists.

The cases of train arrivals on an occupied track, arrivals and departures on a track that is not ready, and departures on an open line that is occupied are disturbing.

**The traffic safety situation in railcar operations is showing practically no improvement.** On the Baltic Railroad, the break in a beam over the springs of a gondola led to a wreck. Breaks in the axle journals of wheel pairs with plain bearings were the cause of freight train wrecks on the Central Asian and Northern Railroads. Uncoupling of cars from freight trains because of technical malfunctions, mostly journal box friction, is widespread. There are still many cases of breaks in automatic couplings and jamming of wheel pairs.

**There were no wrecks in locomotive operations in the first quarter.** However, the number of times they have gone through prohibiting signals remained at practically the same level. There were more of them on the Kemerovo, Central Asian, West Kazakhstan, Alma-Ata, and South Urals Railroads. All these cases were within the boundaries of a station; about 80 percent of them were at night.

The many cases of damage to locomotives have created serious problems in transport operations. There have been more than 1,700 cases over the past 3 months in the railroad system. Nearly one-third of them occurred on the Sverdlovsk, Alma-Ata, Transbaykal, and October Railroads.

The departure of trains with overlapping end cranes are a source of particular concern. Such cases were revealed in the last quarter on the October, Gorkiy, Tselina, South Urals, Moldavian, Krasnoyarsk, Transbaykal, Sverdlovsk, and Kemerovo Railroads.

**While there was a general decline in the number of cases of wastage, in the STsB [signalization, centralization, and block system] and communications area, the number of malfunctions in STsB units increased, interrupting train traffic.** There were cases in which an authorizing signal was falsely displayed on the Sverdlovsk, Volga, and West Kazakhstan Railroads. STsB and communications workers on the North Caucasus Railroad were at fault because a freight train was allowed on an occupied track, which led to a collision and derailment of rolling stock.

The number of rail coupling failures in the system is high.

**The number of cases of defective output in electrification and power supply facilities has increased by 1.7 percent as much.** They have become more frequent in the West

Siberian, Transbaykal, South Urals, and Sverdlovsk Railroads. The collapse of catenary system supports because of accessory corrosion has created a serious threat to traffic safety on the Azerbaijan, Transcaucasian, Sverdlovsk, and North Caucasus Railroads.

Malfunctions in the catenary system and current collectors and improper actions by locomotive brigades have led to the damaging of more than 200 locomotive current collectors and 50 cases in which the trolley wires have burned through. The situation with respect to the operation of current collectors is particularly bad on the Gorkiy, Transcaucasian, and South Urals Railroads.

**With respect to container transport and commercial work, there has been an overall decrease in the cases of defective output, but the number of cases has increased on 10 railroads.** Most significantly on the West Siberian, Baykal-Amur, Transbaykal, Moscow, and Belorussian Railroads. More than one-quarter of all the cases of defective output in this work were on three lines—the South Urals, West Siberian, and Transbaykal Railroads. On the Kuybyshev Railroad, a protective cap for the opening on a tank car which fell on the tracks caused a freight train wreck. There were many other violations leading to spilled loads. Five such cases have occurred on the Baykal-Amur Mainline since the beginning of the year.

As before, the basic reasons for the wastage in this work are failure to secure freight or incorrectly securing freight on open rolling stock. This leads to the slipping and shifting of a load and causes the movable parts on machinery and mechanisms being transported to turn around. As a result, rolling stock derailments and damage to bridge trusses and catenary system supports, which causes lengthy interruptions in train traffic.

**The situation with respect to traffic safety on crossings continues to be critical.** In the first quarter, 35 persons were killed and 50 wounded in collisions with motor vehicles. The most disturbing conditions in this dangerous area were on the Central Asian, Kuybyshev, Gorkiy, North Caucasus, Alma-Ata, Lvov, Krasnoyarsk, Donetsk, and October Railroads.

The overwhelming majority of ChP's [accidents] on crossings are the fault of motor transport drivers who violate the Road Traffic Rules when the automatic crossing signals malfunction.

Thus, a freight train ran into an UAZ-469 motor vehicle at an unprotected crossing on the double-track section from Leningrad to Volkhovstroy on 31 March. In the collision, the vehicle was thrown over onto the adjacent track, where it was hit by express train No 16 from Moscow to Murmansk. As a result, five persons in the vehicle were killed. Fortunately none of the train passengers were casualties. The vehicle driver, who flagrantly violated the rules when the crossing signals were in good working order, was at fault.

Analysis of materials from the investigation of traffic safety violations shows that most of them occurred because of the lack of discipline and carelessness of negligent railroad workers and precisely where labor collectives display a compromising attitude toward violators and do not concentrate their attention on reinforcing discipline.

The overwhelming majority of workers on the steel mainlines perform their duties vigilantly and conscientiously. Many of them have prevented possible severe consequences from traffic safety violations by their prompt actions. Here are some examples.

V. Sidorov, an engineer at the Rybnoye Locomotive Depot on the Moscow Railroad, was bound for the Podlipka station on 7 January when he felt a jolt to the side on the switch, and he reported this immediately to the assistant station manager. When this location was inspected, a break in the rail was discovered.

In the Murmansk Division of the October Railroad, crossing guard M. GnUTOVA saw a brake beam that was dragging under a passing train on the night of 5 February. The train managed to stop, and a threat to safety was removed.

In checking a freight train on 16 February at the PTO [maintenance center] in Kem, on the same October Railroad, car inspector A. Yekimov found old cracks in the cars' critical truck assemblies, thanks to his high professional skill.

Crossing attendant A. Fedchenko (the Khutor Mikhaylovskiy PCh [presumably: crossing] on the Southwestern Railroad) discovered that there was friction in a generator gearhead on a passing express train (No 1 from Moscow to Kiev) on the night of 14 March. The train was stopped in time.

There are many such examples of vigilance and skillful, efficient actions by railroad workers.

It is very important now not to lose time to thoroughly prepare railroad workers, departments, and technical facilities for the forthcoming heavy passenger traffic and the spring and summer track work. And most importantly, of course, work with people, concern for establishing normal conditions for working and relaxation, and continuing attention to their needs in production and in everyday life.

We have to closely study and disseminate the experience of subunits and enterprises that have been operating for a long time without accidents.

Traffic safety will be assured if each railroad worker knows his duties well and carries them out efficiently and if he continues to remember that he and only he bears personal responsibility before the state for the safety of passengers and the tremendous physical assets that are being carried by rail.

### Collegium Examines Suburban Train Services

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[Report from the MPS [Ministry of Railways] Collegium: "They Dictate the Interests of Suburban Passengers"]

[Text] An enlarged session of the MPS Collegium in which the managers of railroads, a number of divisions, stations and terminals took part was held recently. V. N. Ginko, first deputy minister of railways, delivered a report "On measures to provide for the increasing amount of suburban passenger traffic and to improve its quality and economic efficiency."

It was noted that 4.4 billion passengers were carried last year. International passenger traffic increased by nearly 30 percent. Services valued at 460 million rubles—10.2 percent more than in the preceding year—were provided at terminals and on trains.

The proportion of suburban service in passenger traffic is high, and it is significant; 90.2 percent of the departures and 30 percent of the passenger turnover. More than half of the suburban traffic goes through the eight largest hubs—Moscow, Leningrad, Riga, Kiev, Kharkov, Minsk, Gorkiy, and Novosibirsk. Here, especially in the capital hub, where nearly 30 percent of all suburban passengers are served, the traffic is very heavy and involves many problems. In the peak hours they are using paired electric trains as a way to get out of the situation. Plans have been worked out to make up electric trains with 14 cars in the Moscow hub; they are planned for delivery in 1990.

There are still a great many delays of electric trains on the suburban lines, which has given rise to justifiable criticism from passengers and the collectives of enterprises where the pace of work is disrupted because of this. We cannot reconcile ourselves to the fact that they are following only 97 percent of the traffic schedule. Many delays result from serious shortcomings in track maintenance, rolling stock malfunctions, and miscalculations in regulating the traffic.

The reserves and opportunities for increasing the schedule speed of suburban trains are being poorly utilized. Zonal organization of traffic is hardly used on many lines.

It was emphasized that with the shortage of rolling stock, particular attention should be devoted to improving the quality of its maintenance and repair.

The traffic safety situation is also disturbing. There were 138 cases of damage to electric trains last year, 66 of them requiring an auxiliary locomotive.

Attention was given to the need to complete automation of suburban ticket sales; 80 to 85 percent of the sales are now automated. Many lines are not properly engaged in building ticket sales pavilions, shelters, and high passenger platforms and putting them in order or providing for waiting areas, and they are not providing accurate passenger information.

Control and inspection work was subjected to severe criticism. In 1988, 1,300 unticketed passengers were discovered on suburban trains. But how many of these "travelers" are still riding? What are transport's losses because of this? But after all, suburban transport is unprofitable now. As long ago as 1919, preferential subscription rates were established which are now being used by about 60 percent of the passengers. And with a revenue rate of 4.921 kopecks for 10 passenger-kilometers, the production cost is 6.798 kopecks.

After discussing all aspects of the suburban transport situation, the collegium outlined a combination of steps aimed at eliminating the shortcomings, improving the quality of passenger service, and increasing income.

The collegium session also examined ways of developing and increasing the efficiency of the foreign economic activity of the railroads and transport enterprises and organizations. Deputy Minister of Railways V. N. Butko delivered a report on this matter.

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